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ABSTRACT

The Vocational-Technical Education Consortium of States (V-TECS) conducted a marketing study that considered the implications of six options for the organization's future. The first option is continuation of the status quo, which is dangerous because existing members may leave the consortium. The second option is the status quo combined with an effort to sell occupational analysis catalogs at a high price. This is found to be feasible if catalog prices for nonmembers are raised above the implicit price paid by members. Prices would have to be set so that nonmembers would pay $80,000 or more in order to get all of the catalogs. Catalog sales at the high price would not generate a large amount of revenue, compared with other options. The third option is to sell the catalogs at a low price: this strategy might generate a substantial revenue, and prices to members could be reduced. The fourth option is to expand membership by creating multiple membership categories, thus facilitating catalog sales in nonmember states and increasing the visibility of V-TECS. The fifth option is to add new products or services, such as curriculum and testing materials. Although this option could produce substantial revenue, V-TECS's performance in producing quality catalogs could suffer. The sixth option is to sell catalogs from the current inventory and use the proceeds to create an endowment. The income so generated would be far less than that needed to run the consortium. In choosing an option, the V-TECS must formulate a marketing plan (identify the consortium's purpose, objectives, and goals), and then develop a strategy and a marketing program. (KC)

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# THE 1980 V-TECS MARKETING STUDY

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# EXECUTIVE SUMMARY

The Vocational-Technical Education Consortium of States (V-TECS) has been highly successful in achieving its original goals. Despite this success--or perhaps because of it--there is unrest among the membership. Various problems have begun to concern member states. As a result, V-TECS faces the problem of rethinking its purpose and objectives and choosing its direction for the next decade.

The marketing study does not answer the question, where does V-TECS go from here? But the study does work out the implications of 6 basic options open to V-TECS.

The first option is continuation of the status quo. This is found to be a dangerous option to choose, largely because the status quo contains incentives for existing members to leave the consortium.

The second option is the status quo combined with an effort to sell catalogs at a high price. This is found to be feasible if catalog prices for nonmembers are raised above the implicit price paid by members. Members pay a $20,000 membership fee every year. In addition, they incur costs of approximately $60,000 in order to meet the requirement of developing catalogs. Thus, catalog prices must be set so that nonmembers would have to pay $80,000 or more in order to get all of the catalogs they desire. The marketing study concludes that a price per catalog of $4,706 or more would accomplish this objective. The study also concludes that various types of discount pricing schemes would be of only limited value. Catalog sales at the high price would not generate a large amount of revenue, compared with other options.

The third option is to sell the catalogs at a low price. This strategy might generate a substantial revenue. If that revenue were used to reduce the total costs incurred by member states, total cost per state could be lowered from $80,000 per year to as low as $14,000 per year. If catalogs were sold to private and public employers, the revenue generated by this option might cover the entire cost of the V-TECS operation.

The fourth option is to expand membership by creating multiple membership categories. An associate membership for nonmember states would not generate significant revenues for V-TECS. But it would facilitate catalog sales in nonmember states and it would help V-TECS become a recognized leader in the field of performance based vocational-technical education. Affiliate membership for individuals and organizations, other than states, would also increase the visibility of V-TECS and would facilitate sales. In addition, it is just possible that such membership could become large enough to make a substantial financial contribution to V-TECS.

The fifth option is to add new products or services. Curriculum materials could, conceivably, generate enough revenue to finance the entire V-TECS operation. The sale of testing materials might generate substantial revenue also. The major danger with this option is that V-TECS will lose sight of its original purpose and, as a result, its performance in producing quality catalogs will suffer.

The sixth option is to sell catalogs from the current inventory and use the proceeds to create an endowment. Income from the endowment would then be used to help pay the costs of operating V-TECS. The income so generated would be far less than that needed to run the consortium.

In summary, among the options open to V-TECS are several which offer the possibility of financial self sufficiency. But the basic attraction of V-TECS is such that the other options would work even though member states would have to contribute resources both through the membership fee and the catalog development commitment.

In choosing the option, the V-TECS board of directors must formulate a marketing plan. This entails identifying the consortium's purpose, objectives and goals. Once this has been done, a strategy must be developed (i.e., an option chosen), and a marketing program must be developed.

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# PREFACE

The charge to conduct a marketing study for V-TECS came unexpectedly in April, 1980. Completing the assignment within the limited time available meant calling upon the skills of a number of people, all of whom were given a short time to complete their assignments. We would particularly like to thank staff members Jack Devorshak, Judy McMurdie, Dick Nordstrom, Virginia Norvell and Gary Saunders for their willingness to put a concentrated effort into the project on very little notice.

Completion of the study also required the help of key members of the V-TECS Central Staff. We wish to thank V-TECS staffers Victor L. Harville and Ronald D. McCage for taking the time to answer questions and arrange interviews.

Many vocational educators were consulted during the project's mail and personal interview surveys. The number is too large to permit a specific listing here, but the authors do wish to express their gratitude to all of the participants. In addition, we wish to state that, in general, the professionalism of the vocational educators and administrators with whom we communicated is impressively high.

The study which follows was not designed to come up with a single answer to the question of how to market V-TECS products. Instead, the study describes the various options and their implications without concluding which option represents the best choice. The authors would like to conclude, however, that V-TECS has before it several opportunities to make a difference in the quality of American vocational education. What V-TECS has already accomplished is impressive. What V-TECS has the potential to accomplish is even more impressive. We hope the consortium achieves its potential.

Richard E. Hattwick
Michael T. Pledge

Macomb, Illinois
June, 1981

# CHAPTER ONE

## INTRODUCTION

In April 1980 the board of directors of the Vocational-Technical Education Consortium of States (V-TECS) authorized the state of Illinois to develop marketing programs for catalog sales and subscriptions in lieu of the development of one catalog. The document which follows reports the findings of that marketing study.

This chapter identifies the problems and possible solutions. Chapter Two analyzes the possible consequences of adopting each of several different options, and Chapter Three identifies the elements of a marketing plan.

### I. THE HISTORICAL BACKGROUND

The Vocational-Technical Education Consortium of States (V-TECS) is a cooperative effort among 16 states and 3 agencies to develop worker-validated catalogs of duties and tasks, tools and equipment, and performance objectives and guides in selected areas of occupational education. "The prime mission of V-TECS is to provide 'front-end' data essential to the establishment of performance based vocational education programs."[1] V-TECS products are designed to be used in vocational-technical curricula development, program planning and program evaluation.[2]

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[1] B.R. West. V-TECS: The Critical Mass for a Performance Based Vocational Education System. Printed by the ICMC pursuant to grant number 3-76 from the Indiana State Board of Vocational and Technical Education, p. 3.

[2] Vocational-Technical Education Consortium of States. "Catalogs of Performance Objectives and Performance Guides." Promotional brochure mailed to persons making inquiries in July, 1980.

V-TECS was established in 1973 by a group of states[3] that envisioned the consortium approach as the low-cost method of producing reliable "front-end data." It was thought that the members could save money by avoiding duplication of effort; it was hoped that the members could increase the number of catalogs being produced by means of a membership requirement of producing 2 catalogs every 450 days; and it was thought that the use of uniform guidelines and procedures, backed by central staff monitoring, would ensure confidence and promote transportability of products among states.

The founding members were later joined by a handful of other states interested in encouraging performance based vocational education programs. A representative of one of those new member states spoke for many others when he assessed the importance of V-TECS with these words: "The single deterrent to widespread adoption of performance based vocational education has been the lack of valid information upon which to make decisions, plan programs, develop the necessary curricula and evaluate the system. V-TECS now provides this information."[4]

Progress was rapid. By 1981, V-TECS catalogs were available for 85 different occupational areas. In addition, several dozen more catalogs were in various stages of development. V-TECS was also delivering on its promise to maintain quality. User surveys generally indicated a high degree of satisfaction with respect to quality.

Despite this good showing, or perhaps because of it, 1980 began as a year of soul searching by V-TECS. The October 1980 meeting of the V-TECS board of directors began with a discussion of the consortium's goals. That discussion revealed a strong desire to see V-TECS expand beyond its original purpose of ". . . providing the front-end data for performance based vocational education."

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[3] The Commission on Occupational Education Institutions of the Southern Association of Colleges and Schools played a key role in organizing and subsequently supporting V-TECS.

[4] West, op. cit., p. 3.

At the October 1980 board meeting, it was also revealed that several member states were having difficulties meeting the financial commitment of full membership. For this reason, five members asked permission to substitute something of value for one of the catalogs which they were obligated to produce. Clearly, the cost of membership was an issue to be faced. The financial crunch threatened to become more serious in 1981 when President Reagan announced plans to make major cuts in federal funding for vocational education.

Some states that had no immediate cash problems were also questioning the cost of membership because of other uses which they could see for their V-TECS investment. At the October 1980 board meeting it was stated that seven member states would probably leave the consortium if it did not expand its services to include curriculum development. It was also noted that three or four other states would leave if the consortium lost sight of its original purpose.

## II. THE PROBLEMS

The decision of the V-TECS board to conduct a marketing study was made at a time when V-TECS was faced with a number of problems. As indicated in Appendix A, the marketing study team identified four basic problems facing V-TECS. Those are:

1. The problem of finding ways to reduce the annual cost of membership in V-TECS

2. The problem of finding ways to increase the revenue which supports the central staff.

3. The problem of finding ways to increase utilization of existing catalogs.

4. The problem of deciding whether or not to expand the range of services provided by V-TECS.

## III. THE OPTIONS

The V-TECS Marketing Study selected the following strategy options for analysis:

1. The status quo
2. The status quo plus an intensive effort to sell catalogs at a high price
    a. A single price
    b. Various discounts
3. The status quo plus an intensive effort to sell catalogs at a low price
    a. Catalogs priced to recover cost
    b. Catalogs priced for partial recovery of cost
4. Multiple membership categories
    a. Two categories: full and associate memberships for states
    b. Memberships for organizations other than state governments
5. New products
    a. Lists of duties and tasks, performance objectives, and tools and equipment
    b. Curriculum materials
    c. Testing materials
    d. Certification services
6. An endowment created by sales from the existing inventory of catalogs

Estimates were made of the benefits and costs accruing to each option. Chapter Two presents some of the results and describes the reasoning behind each estimate. More detailed discussions of the assumptions will be found in Appendices B and C. While the assumptions behind the estimates can be challenged, the data included in this study provide a starting place for V-TECS' deliberations regarding its future.

# CHAPTER TWO

## AN ANALYSIS OF MARKETING OPTIONS

This chapter analyzes the financial and membership implications of six major marketing options. Variants of several options are also considered.

The results which follow are heavily influenced by the estimates of the number of customers for V-TECS products. Those estimates are identified in the text. A discussion of the reasoning behind the assumptions is presented in Appendix B.

### I. OPTION ONE - THE STATUS QUO

The basic thinking behind V-TECS REMAINS SOUND. The low cost method of producing catalogs appears to be the consortium approach. There appears to be a need for the production of at least 20 new catalogs per year, thus justifying a central staff of at least the present size. This, in turn, means that the consortium will need a membership of at least 16 members, each paying a yearly membership fee of $20,000.[1]

However, the Status Quo contains several unstable elements. These are:

1. A decline, in real terms, in the funds available to state agencies for research and development activities.
2. A belief that curriculum development should receive some of the state resources currently going into catalog development.
3. The availability of catalogs for purchase by nonmembers at a cost less than membership in V-TECS.
4. The impending need to raise more money to support the central staff.

Continuation of the present arrangements is likely to lead to a loss of perhaps as many as seven current members. It is conceivable that this loss will be offset by the entry of new member states. But the attraction of membership is not as great as it once was. In fact, from the strictly financial standpoint, most states would find it much cheaper to buy the catalogs desired.[2] Consequently, the main attractions of membership would be (1) prestige or (2) civic spirit (the willingness to sacrifice state resources for the national benefit in full recognition of the fact that many other states will to some extent enjoy the benefits without accepting the responsibilities.)

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[1] The $20,000 membership fee will probably need to be raised periodically to keep up with inflation.

Prestige and civic spirit are real forces in the world. Churches and numerous civic organizations survive because of such values. Based on experiences of local chambers of commerce, it is hypothesized that with prestige and civic spirit as the motives, V-TECS membership might ultimately fall to 20 percent of the states or ten civic-minded member states[3] with a transitory group of perhaps six to eight states that join, stay for awhile and then leave.

Clearly the present situation is unstable. The remaining five options analyzed by the marketing study represent possible methods of removing the instability.

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[2] Here are the numbers. In 1982, the total membership cost (membership fee plus catalog development) could be about $80,000 per year. A nonmember state could buy all 85 catalogs for $600 each and only spend $51,000. In subsequent years, if 20 new catalogs were produced annually the nonmember state could buy all of them for a total cost of $12,000. Of course, if the state wanted to make copies for in-state distribution and do so legally, it would have to pay $3,000 per catalog. Even at this price, the state could buy up to 26 catalogs per year at the same cost as a full membership. Any state primarily interested in, say, only one-half of the available catalogs could buy and reproduce 20 a year for $60,000. This would save the state $20,000 a year by not being a member. In 4 years the state would have all of the backlog of catalogs it desired. It could then cut back spending to $30,000 a year. This would enable the state to buy 10 of every 20 catalogs produced in future years.

[3] This is based on the 80:20 rule, a management concept which, when translated to this situation, is interpreted as saying that 20 percent of the states will carry the organization and the remaining 80 percent will get a free ride. This is a subjective interpretation meant to stimulate thought.

## II. OPTION TWO - THE STATUS QUO PLUS AN INTENSIVE EFFORT TO SELL CATALOGS AT A HIGH PRICE

### A. Case One - A Single Price

One possibility is to sell a sufficient number of catalogs to offset membership losses and accommodate budget increases for the central staff. This option would be counter-productive as long as the sales price remains at $600 for the right to use and $3,000 for the right to reproduce a catalog. As noted earlier, such prices provide an incentive for states to remain nonmembers. Hence, if this option is chosen, the price of the catalog should be raised.

What is the minimum price that would make membership a rational financial choice for a state? It is a price that would enable a member state to acquire the catalogs it desires at a lower cost than nonmembers. Currently, states pay $20,000 a year for membership and also incur costs of approximately $55,000 a year to meet the catalog development obligations. Therefore, membership can cost a state $75,000 per year. With inflation, the cost is likely to be $80,000 or more by 1982. If a state can buy the number of catalogs it wants for a total expenditure of less than $75,000 now, or $80,000 in 1982, then it benefits the state to be a nonmember. Therefore, the minimum price which will encourage membership is the price at which a nonmember state's expenditures for catalogs exceed the cost of membership.

There are two ways to determine this price. The first is to look at the issue from the standpoint of potential new members. Such states will be interested in both the 85 catalogs already produced and the 20 new catalogs to be produced each year. The second approach is to look at the issue from the standpoint of existing members. These states already have as many of the original 85 catalogs as they want. Therefore, their concern is the cost of the new catalogs (approximately 20 per year). We will use the member state point of view for our analyses since retaining existing members appears to be a more important goal than attracting new ones.

The "typical" existing member starts with the knowledge that not all of the 20 new catalogs will be of interest to the schools in their state. What percentage will be of interest? We will use the experience of Virginia to contend with this question. The marketing study research team determined that, of all member states responding, Virginia had the highest rate of dissemination of catalogs per school district. Hence, Virginia's experience represents the most optimistic case and, by definition, suggests the lowest catalog price consistent with encouraging membership. In Virginia's case, 6 percent of the titles were not distributed and another 9 percent were distributed in such small quantities that the state might question the wisdom of buying them.[4] Therefore, we will assume that a state will not buy 15 percent of the V-TECS catalogs offered for sale in a given year. This suggests that the existing member states might want 85 percent of the 20 new catalogs produced annually, or 17 catalogs.

If each member state wants 17 new catalogs a year and if each state will be spending $80,000 a year on V-TECS membership by 1982, then the value of each catalog ($80,000 divided by 17) is $4,706 (rounded to the next higher whole number.

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[4] In Virginia, 248 copies of the "average" catalog were "distributed." In 9 percent of the cases, 100 or fewer catalogs were distributed. It is this 9 percent that is added to the 6 percent not distributed to arrive at the 15 percent figure. The assumption that a state might question the wisdom of buying such catalogs is clearly subject to debate.

If V-TECS charged nonmembers a price of $4,706 per catalog, then there would be no financial incentive to be a nonmember. Membership might be made more attractive by putting nonmembers price 10 percent above member cost. A charge of $5,177 would do this.

The option of selling catalogs to nonmembers at a price of $5,177 should help retain member states wanting to purchase most of the catalogs and unwilling to make illegal copies. Such a policy could also encourage a few new states to join. It would appear possible, too, that with a direct sales effort, enough catalogs could be sold to nonmembers to add $105,611 to V-TECS' income.[5] It should be emphasized that this is a highly speculative estimate.

The salability of a $5,177 catalog looks more plausible if one assumes that the state will distribute copies to all of its local schools and that the state then computes the cost of the catalog in terms of the cost per school. For a state with 300 schools, the cost per catalog for each school would be $17.26. This is hardly an exorbitant sum.

Ten nonmember states currently have 300 or more public high schools, area vocational centers and community colleges. A good direct selling effort might convince these states that the price of $17.26 per school is a bargain.

There is a variation of the high price strategy which would add to the attractiveness of V-TECS membership. That variation consists of cutting in half the catalog development requirement for membership. If a state only had to produce 1 catalog every 450 days, the annual total cost of membership would fall from $80,000 to $50,575. However, the price of a catalog would rise. Instead of 20 new catalogs a year, there would be 20. Each state would hypothetically want 8.5 of the 10 catalogs produced and the cost per catalog would therefore be $5,950 (rounded up). With a 10 percent markup, the price to nonmembers would be $6,545. At this higher price, catalog sales to nonmembers might fall. But, members would still have a financial incentive to remain in the V-TECS consortium.

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[5] This figure is based on the assumption that 20 percent of the nonmember states each buy 3 catalogs annually (.20 x 34 x 3 x $5,177 = $105,611). The 20 percent figure is in line with surveys of local schools. The 3 catalog figure is in line with the only recent experience that V-TECS has had selling a high price catalog to a state (North Carolina bought 3 at $3,000 each).

### B. Case Two - Various Discounts

Another variation of the high price approach would be to sell catalogs at a discount. Any systematic price discounting plan would have to keep overall catalog prices high enough to make membership a paying proposition. Therefore, the price to any customer who buys many different catalogs should average more than the $4,706 which members in effect pay by meeting their membership obligations.[6]

If a volume discount plan were to be tried, the price structure would have to be established so that a state buying 17 different catalogs would pay an average price of at least $4,706 per catalog. Since we might expect many states to buy several catalogs if they buy any, it might be worthwhile to price the first catalog at a high price (for example $6,000); offer the second at a lower price ($5,500) and the third at $5,177, which is 10 percent above the member's price. Additional catalogs might then be sold at the $5,177 price. Such a plan makes membership the least expensive way to legally obtain catalogs.

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[6] As explained on page 10, the "price" of $4,706 assumes that the average member state wants 17 of every 20 new catalogs and that membership expenses total $80,000 ($80,000 ÷ 17 = $4,706).

Another way of using promotional discounts would be a special introductory price offer. This could be done either sporadically or on a systematic basis, but each buyer state would have to be limited to 1 or 2 catalogs a year. This approach would allow V-TECS to sell a few catalogs at a price well below the total membership cost without discouraging membership on the part of those states wishing to use large numbers of catalogs.

The present pricing structure might work for such a promotion ($3,000 with a license to reproduce and $600 with no right to reproduce). However, the number of catalogs which any customer could buy would have to be limited. Furthermore, care would have to be taken to avoid catalog sharing. For example, 5 states might each buy 3 catalogs at discount prices and then swap with one another. One way to prevent this would be to offer promotional discounts on only a few catalogs in any given year. Another approach would be to offer discounts only on catalogs which could be used for reproduction (however, it would be very difficult, if not impossible, to effectively enforce this restriction).

The net effect of the discount approach might be to attract business from 20 percent of the nonmember states and various groups that cannot presently be members, such as city school systems. Together, these customers might generate $80,640 per year in sales.[7] Thus, the discount approach might increase the consortium's revenue over what would be expected if catalogs sold for a single price.

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[7] This estimate assumes that 20 percent of the nonmember states buy 3 catalogs each at $3,000 per catalog. In addition, it is assumed that 20 percent of the 27 largest school systems in nonmember states each buy 6 catalogs at $600 per catalog. This is obviously a very speculative estimate.

## III. OPTION THREE - THE STATUS QUO PLUS AN INTENSIVE EFFORT TO SELL CATALOGS AT A LOW PRICE

### A. Case One - Catalogs Priced to Recover Costs

Sales at a high price could encourage membership and might produce substantial revenue from sales to nonmembers. But the high price would encourage illegal copying and would discourage widespread legal use of the catalogs in nonmember states (and even within some member states where the state restricts distribution). Furthermore, by keeping the total cost of membership high, the high price strategy could discourage the expansion of the consortium.

An alternative strategy is to sell catalogs at a low price. However, to do so, certain precautions must be taken in order to protect the value of membership in V-TECS. The basic requirement for success appears to be: A Low Price Strategy Will Work if Total Sales Enable Members to Recover Their Total Membership Costs. Therefore, a low price strategy should set the catalog price at a point where the profit on total catalog sales equals the cost of the central staff plus the costs incurred by the member states in developing catalogs. In fiscal year 1981/82, assuming a 6.7 percent inflationary cost increase, this low price strategy would have to raise $1,305,460 to cover the cost of the V-TECS operation (assuming members are required to produce 2 catalogs every 450 days).[8] Alternatively, the low price strategy would have to raise $835,980 if the development of 1 catalog is required per member.[9] Is either option feasible?

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[8] The number $1,305,460 is consistent with the assumption that the states will have to incur expenses of $80,000 for membership fees and catalog development in 1982. Together the 16 member states will contribute $1,280,400 to the consortium. This represents a contribution of $80,025 per state (for expositional purposes, this sum is rounded to $80,000 in the text). Actual consortium expenses will exceed $1,280,400 by $25,000. Under the status quo, this excess will be covered by sales of products under the high price option (Option II). Such sales were expected to generate a revenue of $23,486 in fiscal year 1980/81. Assuming a 6.7 percent increase in this revenue, such sales would increase to $25,060 in fiscal year 1981/82. In the case of the low price option, $25,060 must still be raised by the sale of V-TECS products.

Surveys undertaken as part of this marketing study suggest that at a price per catalog in the $10 to $15 range, no more than 18 percent of the high schools, 25 percent of the community colleges, and 80 percent of the area vocational centers would order catalogs. This would mean 4,323 schools ordering catalogs. Surveys also suggest an average order of 4 catalogs per school would be a reasonable assumption. Therefore, 17,292 catalogs would be sold and total revenue would be between $172,920 and $259,380. With printing and handling costs equal to $5 per catalog, total cost would be $86,460 and "profit" to V-TECS would run between $86,460 and $172,920. This sum would not cover membership costs.

The surveys also indicate that under the most optimistic assumptions if prices were raised to the $20 to $30 range, approximately 60 percent of the original buyers would still order catalogs. This would mean 2,594 schools ordering catalogs. If the average order per school were 4 catalogs, sales would total 10,376 catalogs. Total revenue would be between $207,520 and $311,280. If the cost of printing and handling averaged $5 per catalog, total cost would be $51,880. Therefore, the "profit" to V-TECS would range from $155,640 to $259,400. This sum would not cover membership cost.

The experience of the V-TECS promotion at the 1980 American Vocational Association meetings[10] suggests that by the time price reaches $49 per catalog the number of buyers will drop faster than the price rises.

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[9] The Central Staff costs are assumed to remain at $366,500 but in-kind development costs are assumed to be reduced by 50 percent (from $938,960 to $469,480).

[10] At the time the first draft of this chapter was written, V-TECS had sold approximately 163 catalogs at $49 each, for a total revenue of almost $8,000. If the price had been $30 and if 11 percent of the 1,000 attendees had purchased 4 catalogs each, 440 catalogs would have been sold and total revenue would have been $13,200.

This, of course, means that total revenue falls. Therefore, a price at the $30 level may represent the price which will generate the most revenue.[11] However, given the success with the one $49 experiment it appears desirable to try more experiments at this price (or higher) to more clearly identify the price at which total revenue will start to fall as price is increased.

The low price strategy would appear to discourage membership by making it cheaper for a state to buy catalogs on the open market. However, three additional considerations raise the slight possibility of the low price strategy producing the needed revenue. These considerations are:

1. There will be sales to customers other than those included in the three categories of schools used in the analysis (Appendix B). The experience of Illinois suggests that this consideration could lead to a 40 percent increase in anticipated revenue. This could mean a total revenue of $217,896 to $363,160 if catalogs were sold at prices ranging from $20 to $30.

2. It is possible that a well conceived and implemented sales promotion campaign can induce 18 percent of the high schools, 25 percent of the community colleges and 80 percent of the area vocational centers to buy at the $20 to $30 level (that is, the increased selling effort offsets the price increase). In this case, 17,292 catalogs would be sold. Assuming printing, handling and sales promotion costs of $10 per catalog, there would be a profit of $10 to $20 per catalog. Total profit to the consortium would be between $170,292 and $345,840. This estimated profit excludes the 40 percent additional sales discussed under point 1 above. With the 40 percent additional sales, total profit would range from $238,409 to $484,176.

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[11] Since this paragraph was written, additional orders have come in from persons receiving the special V-TECS offer at the AVA meetings. It is possible, that the final results of the AVA experiment will show a revenue of $13,200 or higher. In that case a price of $49 or higher would be the revenue maximizing price.

This sum is still well below the $1,309,130 it would take to run V-TECS with the 2 catalog per state production requirement, but it does come closer to the $838,000 needed to cover all costs of running V-TECS with a reduced catalog requirement. However, there is still a gap of $824,954 to be covered. With 16 members in the consortium, each would have to pay a fee of $51,560 to make up the deficit.

3. There exists an untapped potential market for catalogs among employers. In the private sector alone, initial research suggests a possibility of over 200,000 single catalog sales.[12] If this market were to materialize, catalogs could be sold at the $15 level and the $10 "profit" per catalog would cover the cost of the consortium as it now operates, plus the cost of a small marketing staff. There would still be a profit left over. In addition to the private employer market, there is a public employer market that might be tapped.

In summary, a low price strategy will probably not recover cost unless: a) a strong marketing effort increases the percentage of schools using the product to levels beyond those currently being observed or b) the private and public employer market for catalogs can be tapped.

### B. Case Two - Catalogs Priced for Partial Recovery of Cost

The preceding section indicates that by pricing catalogs in the $20-$30 range, V-TECS might generate a net revenue of between $363,160 and $484,176. This would allow the consortium to reduce membership costs. With the 2 catalog production requirement for membership, the cost incurred by member states to support the V-TECS operation would be reduced from $1,305,460 to $821,284.

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[12] This represents approximately 2 percent of the private businesses in the United States. A survey conducted during the marketing study found 13.6 percent of the respondents saying they might buy a catalog for internal use. However, none has actually made a purchase. There is also a large potential market among the almost 20,000 municipal governments and various state and local agencies.

At $821,284, the cost per member would be $51,330 assuming 16 members. With a 1 catalog membership requirement, total membership costs would be reduced from $835,980 to $351,804. Cost per member would then become $21,988.

Under these conditions it would still be cheaper for any given state to be a nonmember, allowing the 18 percent of its school districts that want catalogs to buy them at $10 to $30 each. But there would be two reasons for states to remain as members:

1. Civic responsibility or prestige motives.
2. Catalogs equal in value to the membership fee are given to member states. The membership fee is defined as including both the cash payment made to support the central staff and the costs incurred in developing catalogs within the state.

The civic responsibility motive is the same reason for being a member that was discussed under the high price option. The only difference is that under the low price option the cost of being a responsible citizen is reduced.

Would a policy of giving catalogs equal in value to the membership "fee" appeal to member states? Certainly some states should find this offer attractive. Knowing that only 18 percent of their high schools would buy catalogs of their own volition, some states would want to buy more catalogs and distribute them to the schools (through workshops, etc.). V-TECS could give such states enough catalogs to equal the value of the membership payment. Thus, the cost of V-TECS membership would be reduced to zero. If a discount were given to members, then V-TECS membership would be the low cost option for such states.

However, there is a problem involved in simply giving catalogs to member states. The problem is that some of the catalogs then distributed by the state would go to schools that would otherwise buy catalogs from V-TECS. For example, suppose Illinois received 1099 catalogs in return for its $21,988 membership "fee" (we assume a $20 cost per catalog, including printing and distribution).[13] Normally we might expect 178 Illinois schools to order 4 catalogs each. This would give a total of 712 catalogs sold to Illinois schools. But, now those schools can get the catalogs free from their state Department of Adult Vocational and Technical Education. Thus, V-TECS loses $14,240 in sales revenue. And that revenue was used in the calculations which reduced membership "fees" to $21,988.

One method of handling this problem would be to eliminate distribution of free catalogs to the states. A second method would be to charge a variable membership fee consisting of (1) the common cost shared equally by all states (the $21,988 in our example) plus (2) the value of the forecasted catalog sales in the state (the $14,240 in our example). Thus, in the case of our Illinois example, the state would pay a membership "fee" of $36,228 ($21,988 + $14,240).[14] In return the state would receive 1,811 catalogs, each valued at $20. Thus, Illinois receives items valued at $36,220 for its membership fees of $36,228. Illinois can then distribute the catalogs inside the state for no charge or for a fee, as it wishes.

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[13] Dividing the Illinois membership fee of $21,988 by the $20 catalog price gives 1,099 catalogs.

[14] The reader is reminded that membership "fee" is defined to include both the cash payment to support the central staff and the in-state cost of developing catalogs.

In the preceding discussion, membership fees were defined to include both cash payments to support the V-TECS central staff and the in-state costs incurred in developing V-TECS catalogs. In the example of the last paragraph, there would be no cash payment by any state to support the V-TECS central staff. Instead, the money needed to support the central staff would come directly from catalog sales revenue. In addition, a portion of the $60,000 cost of developing catalogs within the states would be paid out of catalog sales revenue, and the member states would make up the difference. For example, the Illinois membership "fee" of $36,228 would be paid by having Illinois produce the required number of V-TECS catalogs. Since Illinois would incur costs of $60,000 a year to produce the catalogs, V-TECS would remit a cash payment of $23,772 to Illinois and Illinois would contribute the remaining $36,228.

A third possibility would be to give the state an option. It can pay the common cost shared by all states and receive no free catalogs, or perhaps a token 10 free copies of each catalog. Or the state can pay a variable fee as in the Illinois example and receive a number of free copies equal in value to the fees paid.

## IV. OPTION FOUR - MULTIPLE MEMBERSHIP CATEGORIES

In moving to a discussion of multiple membership categories we also move to consideration of new motives. The primary motive for purchasing a catalog is probably the utilitarian one of obtaining a tool for curriculum development. In the case of membership in the V-TECS consortium, a primary motive might also be to affiliate with, participate in or belong to a worthwhile and prestigious organization.

## A. Case One - Two Categories: Full and Associate Membership for States

The risks and work involved in trying to sell the catalogs to nonmember states naturally raises the question of whether or not some sort of "associate membership"[15] should be used to promote sales and help defray the cost of operating V-TECS. This option is also attractive because of the desire of some members to add to the prestige and credibility of V-TECS.

The twin problems with an associate membership are: (1) preventing full members from shifting to associate membership and (2) determining something of value which could be given as a reward for becoming an associate member.

In order to prevent full members from shifting to associate member status, the price per catalog for associates should be higher than or equal to the price to full members, and associates should have no vote in the consortium.

In order to attract associate members, V-TECS could: (1) lower the price per catalog to less than the price charged to nonmembers and (2) create means for associate members to participate without voting.

V-TECS should also consider making the association with the Southern Association (SACS) less visible. It appears likely that some potential full and associate members are reluctant to join because of the SACS tie. Simply changing the stationery might help to solve this problem.

If the high price option were adopted, one possible strategy would be to award associate membership to any state which buys at least 3 catalogs a year. Awarding associate membership would therefore become a tool to stimulate catalog sales.

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[15] There currently exists an associate member category for agencies which give something of value to V-TECS, but do not pay membership fees or develop catalogs. The U.S. Army, Navy and Air Force memberships fall into this category. It is recommended that this category be given a new name.

If the low price strategy were used, an associate membership fee could be set at a nominal level to encourage participation. A fee of, perhaps $500 to $1,000 should be low enough to attract membership strictly on the basis of the desire to keep abreast of new developments in performance based vocational education (as discussed in the following section). If the associate member fee were set much higher, most states would probably question the value of associating with V-TECS. Such a fee would at best add $17,000 to $34,000 to the V-TECS treasury.

It does not appear feasible to attract many members at a meaningfully high price. Hence, associate membership should probably be regarded as a means of getting cooperation of nonmember states. The payoff to such cooperation would be increased catalog sales in the state. In addition, some associate members might eventually decide to upgrade their participation to full member status.

### B. Case Two - Memberships for Organizations other than State Governments

A low cost membership for nonmember states could not produce a large revenue for V-TECS. However, if less than full membership categories were created for school districts, community colleges, businesses, and even individual educators, the revenue potential might expand. Let us refer to memberships for these new groups as "affiliate memberships." If an attractive benefit package could be created for affiliate members, then sales of such memberships might bring in several hundred thousand dollars in revenue. Such a benefit package does not yet exist, but it might include:

1. A newsletter or journal.
2. An annual meeting at which papers are presented regarding developments in performance based vocational education.

3. Periodic seminars on performance based vocational education.

4. An awards or recognition program.

As indicated in Appendix B there are thousands of school districts, and hundreds of thousands of teachers who might have some interest in the V-TECS affiliate membership. In addition, several thousand of the larger private and public employers might have personnel offices large enough and professional enough to be attracted. If 10 percent of the teachers joined and paid a fee of $15 a year, with $5 profit to V-TECS, the Consortium could have over 38,000 affiliate members with $190,000 added to the V-TECS treasury.[16]

## V. OPTION FIVE - NEW PRODUCTS

A fifth major option for a V-TECS marketing effort is to produce and sell new products. An analysis of some of these potential new products is presented in this section.

### A. Case One - Lists of Duties and Tasks, Performance Objectives, and Tools and Equipment.

Some additional revenue might be obtained by selling separate lists of Performance Objectives, Duties and Tasks, and Tools and Equipment. To obtain a rough estimate of the potential revenue involved, we can use the same percentages as used in the estimate of catalog purchases by local schools. Thus, we might expect 4,323 different schools throughout the country to order such products. This represents 80 percent of the area vocational centers, 25 percent of the community colleges and 18 percent of the high schools.

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[16] Ten dollars of the $15 fee would pay the cost of providing affiliate member services. With 38,000 members the staff function could have a budget of $380,000. This would be as large as the existing V-TECS budget.

Assume that each school orders 4 different duty and task list booklets at a $3 profit to V-TECS per book. Net revenue would be $51,876. Assume further that each school orders 4 tool list booklets at a $1 profit per book. Net revenue would be $17,292. Thus, a not implausible first estimate suggests that sales of both types of lists could net V-TECS $69,168.

There is a potential problem in selling separate lists, however. Many schools may be primarily interested in the tool or task list. If so, selling these lists separately from the catalog may reduce catalog sales. And since there is more "profit" to be made selling catalogs, V-TECS suffers a net loss. Looking at the reasons past users have purchased catalogs, it appears possible that only one-half of the 4,323 schools would want the full catalog in order to develop curricula (several surveys show only one-half of the purchasers using V-TECS catalogs to develop curricula). Therefore, the sale of separate duty and task lists and tool and equipment lists might cut catalog sales in half.

### B. Case Two - Curriculum Materials

The development of curriculum materials by V-TECS is an activity frequently suggested by some member states. A thorough investigation of this issue was beyond the mandate of the V-TECS marketing study. However, the study did conduct an exploratory analysis of this issue and identified its attractions as well as its drawbacks. This option does have a number of attractive features:

1. It could make full membership more attractive.
2. It has enormous potential. If V-TECS developed and sold 1 textbook to only 2 percent of the nation's vocational students, 391,000 books would be sold. At a mark-up of $2 per book, this would generate a profit of $782,000. In addition, there would be revenue

from the sale of teacher's manuals and other supporting items. At higher rates of utilization, even more profit would be realized. If V-TECS could sell 1 textbook to 10 percent of the nation's vocational students, 1,956,000 copies would be sold. At a $2 per book markup, net revenue would be over $3,800,000. All of the costs of V-TECS operations would be covered by sales revenue.

3. It would make associate and affiliate membership more attractive if members were allowed to learn about and contribute to the development of such curriculum materials.

4. It could be accommodated within the existing membership commitments by having each state complete 1 catalog and 1 set of curriculum materials every 450 days.

5. Catalog sales could be tied to curriculum material sales. The curriculum materials could be designed so as to encourage use of the catalogs at the local level.

6. Competing developers of curriculum materials have not shown the productive capacity of V-TECS. Therefore, with V-TECS in this business, the production rate of performance based curriculum materials would increase.

The option of developing and selling curriculum materials also has some major drawbacks. These include:

1. Potential Dilution of Effort--The rate of production of catalogs would drop if resources were shifted to curriculum materials. In addition, the quality of catalogs might decline as corners are cut in order to reduce catalog development costs. Representatives of both MAVCC[17] and AAVIM[18] currently question the wisdom of spending as much as V-TECS does to develop the occupational data for curriculum materials. V-TECS member states might develop the same attitude.

3. Competition--Unlike the V-TECS catalog, most V-TECS curriculum packages would meet direct competition. Many competitors are tough and experienced. There is some queston as to the ability of V-TECS to compete.

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[17] MAVCC is the acronym for the Mid-America Vocational Curriculum Consortium.

[18] AAVIM is the acronym for the American Association for Vocational Instructional Materials.

3. Cost of Development--There would be substantial start-up costs involved in developing standards and guidelines for the development of curriculum materials.

4. Danger of Lack of Acceptance by Many States--There exists the danger that the curriculum materials developed by one member state will not be acceptable to other states. Conceptually this should be handled by the guidelines. In addition, curriculum materials might be marketed directly to schools, thereby reducing the possibility of one state administrator closing the entire state market to a V-TECS product.

The last objection, possible lack of acceptance, leads to a more fundamental issue. Should V-TECS members encourage local schools to use "canned" curriculum packages? Is the use of materials produced by a national organization consistent with the individualization of instruction that is claimed for performance based vocational education? There are those who argue that, in general, curriculum materials should be developed at the local level.

If curriculum materials are developed by V-TECS, they should probably be sold in the same manner as the low price option for catalogs. A low price is dictated by the fact that the ultimate users will be students.

Insofar as the cost of developing the curriculum materials is concerned, let us assume that a complete curriculum package (text, teacher's manual, test bank, audiovisual supporting materials) would cost about the same to develop as one V-TECS catalog. In that case, the existing consortium could cut back catalog production by 50 percent and start producing curriculum materials at the rate of 20 per year within 2 years.

## C. Case Three - Testing Materials

There could be a demand for testing materials both from teachers and personnel offices of employer organizations. If we assume that 2 to 10 percent of the vocational education students were given V-TECS tests every year and that each student were to take 1 test, then at a price of $1 per test total sales of V-TECS tests could range from $391,000 to $1,956,000.[19] If each test booklet were priced to yield a 50 cent profit, the sale of test materials would produce revenue of between $195,500 and $978,000.

If 2.2 percent of the nation's corporations bought testing materials from V-TECS, and if each bought 10 tests, sales volume would be 492,000 tests. At a 50 cent markup per test this would produce a profit of $246,400.

Given the above assumptions the potential profit in selling V-TECS testing materials is high.

### D. Case Four - Certification Services

One possible variation on the testing theme would be for V-TECS to certify vocational students as having met specified standards on a V-TECS test. This option has not yet been analyzed by the V-TECS marketing study.

## VI. OPTION SIX - AN ENDOWMENT CREATED BY SALES FROM THE EXISTING INVENTORY OF CATALOGS

Up to this point all analyses have been conducted by considering only the sales of currently produced products. This was done in order to focus on the incentives needed to retain existing members of V-TECS. We will now consider the issue of sales from the inventory of catalogs produced in the past.

The numbers are impress[illegible] As shown in Appendix C below, sales of old catalogs at a $20 profit per catalog could generate the following revenues from customers in nonmember states:

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[19] The number of students taking the tests would range from 391,000 to 1,956,000.

| | | |
|---|---|---|
| 1. | From public high schools | $61,091 to $349,323 |
| 2. | From community colleges | $14,593 to $43,630 |
| 3. | From private secondary schools | $19,315 |
| 4. | From public area vocational centers | $45,979 |
| 5. | From post secondary vocational technical schools | $11,538 to $130,944 |
| 6. | From post secondary technical institutes | $1,885 to $21,392 |
| 7. | From post secondary business schools | $4,476 to $59,153 |
| 8. | From cosmetology/barber schools | $485 to $6,401 |
| 9. | From post secondary trade schools | $6,095 to $80,536 |
| 10. | From hospital schools | $1,232 to $16,286 |
| 11. | From allied health schools | $399 to $3,161 |

Together these customers might provide V-TECS with a one-time windfall profit of between $167,088 and $776,121.

One possible use of this income would be to return it to the member states. Another option would be to create an endowment with the funds and then use the income from the endowment to reduce total membership costs or to expand the central staff. At a 10 percent rate of interest the endowment would generate income of between $16,700 and $77,600 per year.

The endowment concept would also make it possible to handle future situations where sales of V-TECS products might produce more revenue than was to run V-TECS in that particular year.

## VII. SUMMARY OF FINDINGS

The financial and membership implications of the options discussed above are summarized below in Table II-1. The table suggests that each of three options may have the potential to reduce membership costs substantially. The three are:

## TABLE II-1

## SUMMARY OF RESULTS UNDER VARIOUS OPTIONS

(Excluding windfall gains from sales out of existing inventory)

| OPTION | (1) TOTAL REVENUE LIKELY TO BE GENERATED IN ADDITION TO FULL MEMBERSHIP FEES AND OBLIGATIONS | (2) IMPACT ON ATTRACTIVENESS OF FULL MEMBERSHIP | (3) ANNUAL COST OF BEING A FULL MEMBER (IN 1982) |
|---|---|---|---|
| 1. Status quo | Negligible | Encourages Defections | $80,000 |
| 2. Status quo plus intensive effort to sell catalogs at high price | $80,640 | Increases attractiveness to a modest extent. Discounts must be used carefully. | $74,960 |
| 3. Status quo plus intensive effort to sell catalogs at low price | $86,460 to $484,176[1] | Might encourage defections unless precautions taken | $76,417 to $51,560[2] |
| 4. Multiple membership categories | $17,000 to $34,000 | Might encourage defections unless precautions taken | $80,758 to $79,696 |
| 5. Expansion of products<br>a. Task & tool lists | $69,168 | Negligible | $77,498 |
| b. Curriculum materials | $782,000 to over $1,305,460 | Might encourage membership | $32,946 to zero[3] |
| c. Testing materials | $195,000 to $1,224,400 | Might encourage membership | $67,813 to $3,475 |

[1] The estimates are based on sales to school based customers only. Potential sales to businesses and public employers are not included.

[2] There are several variations of this estimate.

[3] Revenues pay entire cost and yield a "profit."

1. Sale of catalogs at a low price
   This could raise almost $500,000 under optimistic assumptions about school customers. If substantial sales could also be made to businesses and public employers, revenue from catalog sales could be much higher.
2. Sale of curriculum materials
   This option might be able to raise over a million dollars from sales to schools.
3. Sale of tests
   This option might be able to raise well over a million dollars a year from sales to schools and businesses.

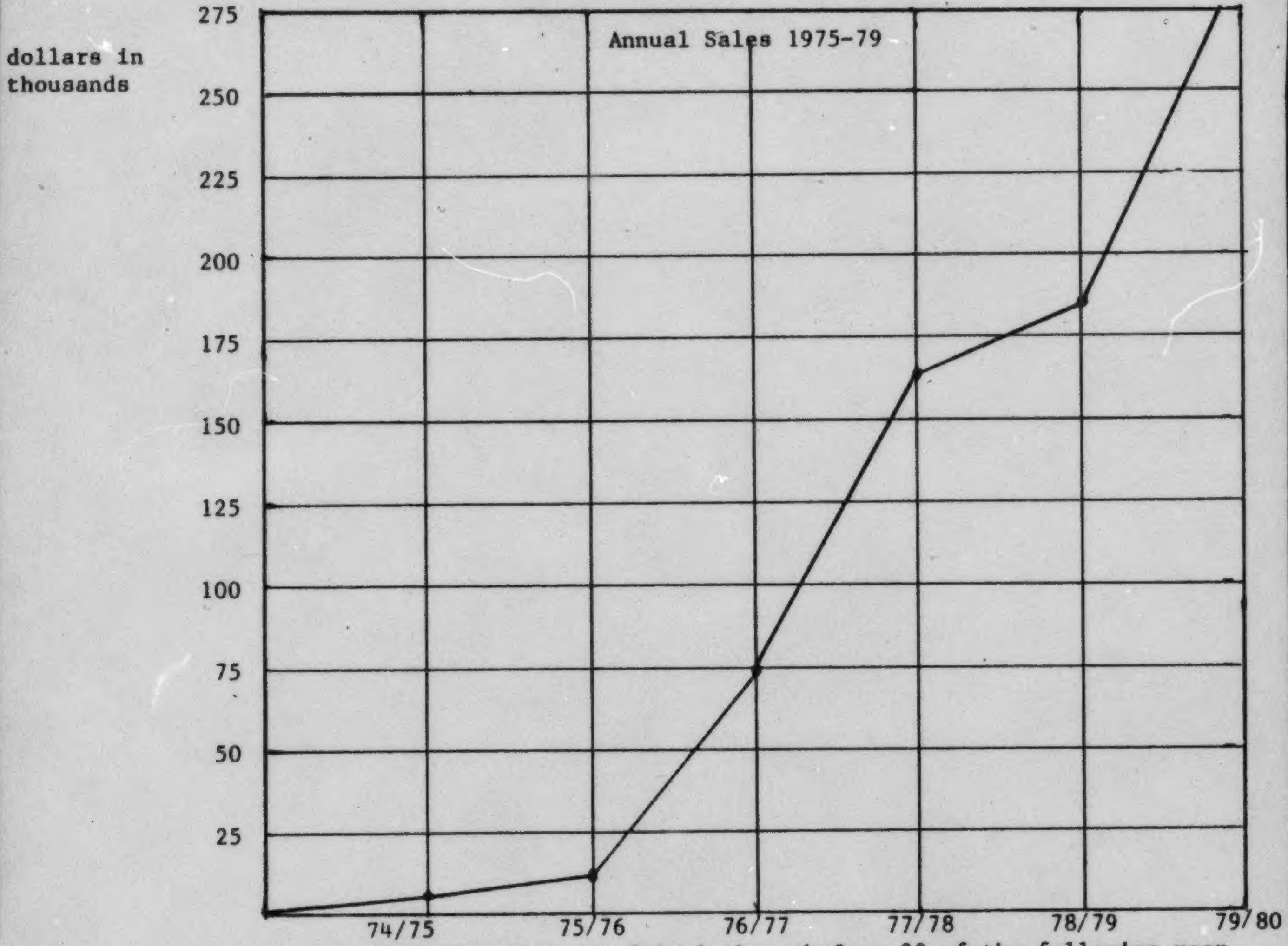
Under the most optimistic assumptions, each of the three options would generate enough revenue to cover all costs of the V-TECS operation. Consequently, the total cost of membership for individual member states could be reduced to zero.

All of the calculations are based on the sale of new catalogs. The calculations do not include potential revenue from the sale of the existing inventory of 85 catalogs (many of which will become obsolete within a few years).

How realistic are these estimates? The sales estimates are based on what appear to be reasonable assumptions. The forecasts appear to be more optimistic than might be expected on the basis of the recent experience of MAVCC. As indicated by Figure II-1 below, MAVCC has been selling curriculum materials for six years, yet its total sales volume in 1979/80 was only slightly above $275,000. Over one-half of those sales were to buyers who were not in the MAVCC consortium. The MAVCC experience does not show a sales volume consistent with our earlier assumptions regarding curriculum material sales. It is not clear how intensive an effort was made by MAVCC to sell outside the consortium, although it should be reemphasized that over one half of MAVCC's sales were to nonmembers. It should also be noted

Figure II-1

CURRICULUM MATERIALS SALES BY MAVCC, 1974-1980



Based on fiscal year, July 1 through June 30 of the following year

Source: Interview with representative of MAVCC.

that V-TECS states represent a larger percentage of the nation's schools and enrollment than do MAVCC states.

## VIII. FIVE YEAR FINANCIAL SCENARIOS

The preceding analysis of the options open to V-TECS was conducted with a basically "timeless" frame of reference. In order to add a dynamic perspective, this section of the summary chapter presents three "moving pictures" showing how V-TECS finances might evolve over a 5-year period under various assumptions.

Scenario 1 shows what might happen if the status quo is maintained. This scenaric points out the strong effect that inflation might have on membership costs (a 6.7 percent inflation rate is assumed). Assuming V-TECS can hold on to 16 members, costs will rise from $75,000 per state in 1981/82 to $98,310 in 1984/85. If membership declines, cost per remaining states will be even higher.

Scenario 2 shows what might happen if V-TECS succeeds in achieving a high volume of sales at a low price and places the revenue from sales of old catalogs in an endowment. Over the 5 year period, cost per member state could fall from $75,000 to $63,766. The decline takes place slowly because in the first year of selling catalogs V-TECS only manages to sell a minimum number. But over the years the consortium gains sales experience and the accumulated effect of V-TECS advertising begins to be felt. By 1984/85 V-TECS reaches the maximum sales level shown in row 3 of Table II-1.

Finally, Scenario 3 portrays a possible transition to self sufficiency. In this scenario the consortium is selling both catalogs and curriculum materials. For the first two years the consortium is developing its first

## SCENARIO 1--THE TREND OF COST PER STATE UNDER THE STATUS QUO WITH 6.7 PERCENT INFLATION

| Expenditure Item | Cost and Revenue Per Year[a] | | | | |
|---|---|---|---|---|---|
| | 1980/81 | 1981/82 | 1982/83 | 1983/84 | 1984/85 |
| 1. Central Staff Costs | $343,486 | $366,500 | $391,056 | $417,257 | $445,213 |
| 2. In-Kind Catalog Development Costs | $880,000 | $938,960 | $1,001,870 | $1,068,995 | $1,140,618 |
| 3. Total Cost | $1,223,486 | $1,305,460 | $1,392,926 | $1,486,252 | $1,585,831 |
| 4. Less Revenue From Sale of Products | ($23,486) | ($25,060) | ($26,739) | ($28,531) | ($30,443) |
| 5. Total Cost Borne by States | $1,200,000 | $1,280,400 | $1,366,187 | $1,457,721 | $1,555,388 |
| 6. Cost Paid by Each[b] State (Assumes 16 Members) | $75,000 | $80,025 | $85,387 | $91,108 | $97,212 |

[a] All numbers rounded to nearest dollar.

[b] The numbers in this row were obtained by dividing the numbers in row 5 (total cost borne by states) by 16 (the number of states in the consortium).

### SCENARIO 2--THE TREND OF COST PER STATE WITH SALES FROM THE EXISTING INVENTORY PUT IN AN ENDOWMENT AND NEW CATALOGS SOLD AT $20 MARKUP

| Expenditure Item | Cost and Revenue Per Year | | | | |
|---|---|---|---|---|---|
| | 1980/81 | 1981/82 | 1982/83 | 1983/84 | 1984/85 |
| 1. Total Cost (From Scenario 1, Line 3) | $1,223,486 | $1,305,460 | $1,392,926 | $1,486,252 | $1,585,831 |
| 2. Less Revenue From | | | | | |
| 2.1 Sales of New Catalogs[a] | 0 | ($86,460) | ($172,920) | ($345,840) | ($484,176) |
| 2.2 Endowment Income[b] | 0 | ($67,000) | ($71,489) | ($76,279) | ($81,390) |
| 2.3 Other[c] | ($23,486) | 0 | 0 | 0 | 0 |
| 3. Total Cost to be Borne by States | $1,200,000 | $1,152,000 | $1,148,517 | $1,064,133 | $1,020,259 |
| 4. Cost Paid by Each State (Assumes 16 Members) | $75,000 | $72,000 | $71,782 | $66,508 | $63,766 |

[a] Assume 4 years to reach full potential. Assume no inflation adjustment for profit margin.

[b] Assume that after one year on the market, all proceeds from a catalog go into the endowment. Assume further that this causes endowment to grow 6.7 percent per year.

[c] Sales of products under current arrangements

## SCENARIO 3--CONVERTING TO A SELF FINANCING PRODUCT LINE OF CATALOGS AND CURRICULUM MATERIALS

| Expenditure or Revenue Item | Cost or Revenue Per Year | | | | |
|---|---|---|---|---|---|
| | 1980/81 | 1981/82 | 1982/83 | 1983/84 | 1984/85 |
| 1. Total Cost Borne by States (Scenario 2, Line 3) | $1,200,000 | $1,152,000 | $1,148,517 | $1,064,133 | $1,020,259 |
| 2. Less Revenue from Sales of Curriculum Materials[a] | 0 | 0 | ($391,000) | ($782,000) | ($1,094,800) |
| 3. Total Cost to be Borne by States | $1,200,000 | $1,155,670 | $757,517 | $282,133 | 0 |
| 4. Profit to Add to Endowment (or Expand Operations) | 0 | 0 | 0 | 0 | $74,541 |
| 5. Cost Per State (Assume 16 Members) | $75,000 | $72,229 | $47,345 | $17,633 | 0 |

[a] Assume 20 per year beginning in 1982/83

curriculum materials. None are sold and all revenue comes from catalog sales as in Scenario 2. By the third year (1982/83) the first curriculum packages are ready for sale. Net revenue from sales in that year reaches one-half the minimum amount shown in row 5-b of Table II-1 above. By the second year, net revenue has doubled. By the third year net revenue has increased 40 percent, or slightly over one million dollars. At this point V-TECS is self supporting. The member states no longer have to contribute cash or in-kind services to make V-TECS work.

Scenario 3 is probably a bit optimistic in terms of the speed at which V-TECS can become self financing - if indeed it ever can. But this scenario does dramatize the stakes potentially involved in expanding the consortium's range of activities. The critical question in this case is whether or not V-TECS could effectively compete in the area of curricular development.

# CHAPTER THREE

## ELEMENTS OF A V-TECS MARKETING PLAN AND PROGRAM

The task ahead is the development of a V-TECS marketing plan and a V-TECS marketing program. The V-TECS MARKETING PLAN should identify purposes and objectives, set goals and describe the broad strategy to be followed. The V-TECS MARKETING PROGRAM should list and describe the actions to be taken in implementing the plan. The major topics that should be covered in both the plan and the program are discussed in this chapter.

## I. CONTENT OF THE MARKETING PLAN

The V-TECS MARKETING PLAN should contain the following elements;

1. A statement of the purpose of V-TECS
2. A statement of the objectives of V-TECS over the period covered by the plan
3. A statement of the goals to be achieved during the life of the plan
4. A description of the strategy to be employed in the attempt to achieve the objectives.
5. A detailed marketing program which explains how the strategy is to be implemented

The following paragraphs describe the first four elements of the plan. Section II, below, discusses the content of the marketing program.

### A. The Statement of the Purpose of V-TECS

The statement of purpose should explain, in very general terms, why V-TECS exists. The statement should be broad enough to allow V-TECS to adapt to changing conditions. Yet the statement must be specific enough to keep the membership's attention focused on what the organization is all about. Most organizations have a tendency to get involved in activities irrelevant to their main purpose. The reason, of course, is that the organization's leaders develop agendas of their own and seek to achieve their personal goals through the organization. A good statement of purpose will make it more difficult for the organization to get involved in irrelevant activities.

A good example of the difference that a statement of purpose can make is seen in the approach taken by two major mail order companies when faced with the question of whether or not to open retail stores. The time was the 1920s. Neither company operated retail stores at the time. But the board of directors of each company was forced to consider that option. Montgomery Ward and Company defined its purpose to be that of providing mass merchandise by mail. Therefore, Ward's board of directors initially rejected the option of entering the retail store business. Sears' Roebuck and Company's leadership defined the company purpose to be that of providing reasonably priced, good quality merchandise to the American middle class. As long as the middle class lived largely on the farm, that purpose could be served strictly through mail order operations. But as the farm population moved into the cities, it would be necessary to open retail stores in order to continue serving them. Therefore, the Sears board authorized a new venture into retail stores. Montgomery Ward and Company eventually followed Sears' lead, but did so reluctantly and ineffectively. It can be argued that Ward made a mistake by defining its purpose too narrowly.

Another example is seen in a comparison of the International Harvester Company with its major rival in agricultural equipment. International Harvester started as an agricultural equipment manufacturer. But it redefined its basic purpose in a way that took it into two major new areas--the manufacture of construction equipment and the manufacture of trucks. Harvester's largest rival in the agricultural equipment industry was Deere and Company. For many years Deere and Company narrowly defined its purpose in a way that caused it to concentrate on agricultural equipment. As a result, Deere and Company totally outperformed International Harvester in the agricultural equipment business. Some observers argue that Harvester failed to keep up with Deere and Company because management had to split its time among the three major parts of the company. It could be said that International Harvester made a mistake by defining its purpose too broadly.

V-TECS must make a similar decision with respect to defining its purpose. The purpose can be narrowly defined. An example of such a narrow definition would be "to produce the basic data needed by vocational educators in order to develop performance based vocational curricula." Or the purpose can be broadly defined. An example of such a broad statement would be "to promote the development of performance based vocational education throughout the United States." As pointed out in the examples of Sears, Ward, Harvester and Deere, there are dangers involved with either a broad or a narrow definition.

## B. The Statement of V-TECS' Objectives

The statement of objectives should spell out what the board of directors seeks to do in more specific terms. Objectives would be such specific statements as "to produce catalogs of performance objectives and performance guides for occupations relevant to vocational education programs," or, "to produce curriculum materials for use by students and teachers," or "to produce performance based tests for use by vocational education teachers," or "to provide a forum for persons interested in performance based vocational education to meet, exchange ideas and formulate joint action programs."

Before the V-TECS board of directors can chose objectives, it must first settle on the purpose of V-TECS. In choosing objectives, the information discussed in the preceding chapters should be of great value.

Among the statements of objectives should be a statement of the constraints that are to be imposed. For example, if V-TECS must eventually be self-supporting, then there should be an objective of having the consortium eventually generate all of the funds it needs through sales of its products.

## C. The Statement of Goals

The statement of goals for the V-TECS marketing plan should specify hoped for achievements in terms of quantity and time. For example, the plan might have a goal of producing 20 new catalogs every year. Or there might be a goal of having 20 percent of all high schools in member states using at least four catalogs by 1983. Or there might be a goal of reducing cost per member state to $15,000 by 1986. Goals should be set by the board of directors in consultation with the staff. The material gathered by the marketing study should be helpful in making the initial goal statements.

## D. The Strategy for the V-TECS

The strategy statement consists of a broad description of how the purpose is to be fulfilled, the objectives accomplished and the goals met. The various options discussed in the preceding chapters are examples of possible strategies.

## II. CONTENT OF THE MARKETING PROGRAM

Once the purpose, objectives, goals and strategy have been formulated by the V-TECS board of directors, the staff can put together a marketing program designed to implement the strategy and meet the goals. Included in this program should be a budget, a calendar of events, and specific consideration of the following issues:

1. Product Mix
2. Product Content
3. Product Packaging
4. Product Life Cycle
5. Pricing
6. Distribution Channels
7. Physical Distribution
8. Promotion
9. Advertising
10. Personal Selling
11. Continuing Market Research
12. Administration

Each of these topics is discussed in the sections that follow.

## A. Product Mix

Product mix considerations fall into two categories. First, there is the question of how many different product lines should be offered. In the V-TECS case, the choice will be made from the following four product lines: catalogs, curriculum materials, testing or certification services, and the promotion of performance based vocational education. This choice will already have been made in the process of choosing objectives.

Secondly, there is the question of depth of the product line. Depth refers to the percentage of all possible items in the product line that are actually offered. For example, the deepest possible product line for V-TECS catalogs would be one that made available a catalog for every occupation into which vocational education graduates enter. A limited product line might consist of V-TECS only offering catalogs in 20 percent of all possible occupational specialties.

The 80/20 rule is an important consideration in determining the depth of the product line. The rule hypothesizes that 80 percent of V-TECS' catalog sales (or curriculum materials sales) will come from sales of 20 percent of the titles. The remaining 80 percent of the available catalog titles will only generate 20 percent of the sales revenue. Now since each catalog involves heavy production costs, it is quite possible that the 20 percent of the catalogs which sell in large quantities will more than cover their costs of production whereas the 80 percent of the catalogs which do not sell well will not generate enough revenue to cover their costs of production. Therefore, from a financial standpoint, V-TECS might consider a product line of limited depth which is restricted to the 20 percent of the occupational domains for which large numbers of catalogs can be sold. These "high selling" catalogs should be periodically updated.

## B. Product Content

The issue here involves adding product content features which will enhance the sales appeal of the product. In the case of the V-TECS catalogs, for example, several respondents to the various marketing study surveys suggested that the catalogs could be made more valuable by adding diagrams or photographs. Some respondents suggested that a listing of tasks at the beginning of the catalog would make it more useful. Two individuals felt that whole sentences should be used throughout the catalog in order to enhance communication. These and other suggestions regarding content should be reviewed in the process of developing the marketing program. Once such a review has been completed, it is quite possible that the content of the catalog will remain unchanged, but a review should be undertaken nonetheless. And the decision as to whether to add or delete anything should be made partly on the basis of the impact on sales.

## C. Product Packaging

The question with regard to packaging deals with the appearance of the product, and with the ease of use. The major issue regarding the appearance of V-TECS catalogs is whether or not to add an attractive cover and binding for the catalog. There seems little doubt about the need for some sort of slick packaging if V-TECS decides to try to sell the catalogs in large numbers. Such a cover helps to sell the product by giving the appearance of something of value. And the cost of adding the cover should not add much more than $1.00 to the cost per catalog copy.

Ease of use is one of the reasons for the current practice of packaging the catalogs without binding. The present arrangement makes it easy to make copies of the catalog, and that was the original intent. However, if catalogs are going to be sold at low prices, it is desirable to discourage copying. And one way to do that is to bind the catalog so that copying becomes more of a nuisance. Ideally, the binding should be done in such a way that good copies can only be made by taking the catalog apart and thus destroying its original good appearance.

One other packaging option would be to produce the entire catalog on higher grade paper and add photographs and/or illustrations. A model for this type of packaging might be the manuals produced by AAVIM.[1] Printing costs for this type of packaging would not be excessive. A V-TECS catalog similar to the 184 page AAVIM Electrical Wiring Manual could be printed at a cost of $3.27 per copy or less.[2]

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[1] American Association for Vocational Instructional Materials

[2] Estimate based on 10,000 copies, 4 color throughout, 70 # white enamel interior, with 4 color photos or transparencies furnished, copy set by printer and a .10 point coated cover, with perfect binding. The cost of art work is not included in this estimate. The estimate was made in March, 1981.

## D. Product Life Cycle

The marketing program should include procedures to follow each catalog over the course of its life cycle. This requires the development of procedures to withdraw catalogs from circulation before they become obsolete and to update or revise existing catalogs at appropriate intervals.

Withdrawing catalogs before they become obsolete is necessary in order to protect the reputation of V-TECS. A customer who buys a catalog and finds it to be out-of-date will clearly develop a negative view of the quality of V-TECS catalogs. In some cases, customers will understand that the catalog was probably accurate at the time of its publication, and will not assume that the catalog in question is representative of most V-TECS catalogs. But in most cases, the customer is likely to generalize his/her experience, concluding that, in general, V-TECS catalogs tend to be out-of-date.

The practical problem is to establish criteria for the withdrawal of a catalog on grounds of obsolescence. One way to do this is to establish a quantitative standard such as a rule that a catalog will be withdrawn as soon as 10 percent of the tasks in that catalog cease to be performed by at least 50 percent of the workers (the percentages are hypothetical). Another way to handle the issue of withdrawal criteria is to establish an advisory group of experts in the domain area of each catalog and have the group make periodic reports to the V-TECS board regarding the issue of whether or not a particular catalog is becoming obsolete.

A policy of updating existing catalogs is desirable if V-TECS decides to advertise itself as the leader in the field. Customers expect the leader to have a full line of catalogs which are kept up-to-date. If V-TECS is able to deliver on this expectation, then its leadership image will be strengthened. A higher percentage of potential customers will buy the V-TECS product and a higher percentage of potential members will purchase membership. If V-TECS does not deliver, then potential customers will look for other vendors and membership will be restricted.

## E. Pricing

See Chapter Two where the issue of pricing is discussed in detail.

## F. Distribution Channels

The distribution channel is the chain of intermediaries between the producer and the consumer. In the business world one finds a variety of channel designs. There is the shortest possible design in which the producer sells directly to the customer. There is the so-called five level channel in which the producer sells to a wholesaler; the wholesaler sells to a jobber, the jobber sells to retailers; and the retailers sell to the ultimate customers.

In the case of V-TECS, then, one choice would be to have the V-TECS staff market directly to the ultimate customer. A second choice would have V-TECS market to state agencies which would then market to the customers within the states. Other choices would have the V-TECS staff market to a state agency; the state agency would then market to intermediaries within the state; and those intermediaries would market to the ultimate customer.

Direct marketing by the V-TECS staff to the ultimate customer would have the advantage of standardizing the sales effort. If the resources could be appropriated, direct marketing would probably result in an overall higher quantity and quality of marketing program. The persons doing the marketing would be specialists who knew marketing techniques. Few state offices could afford to duplicate this level of professionalism.

However, the start-up costs of a comprehensive direct marketing effort would be substantial. It is likely that the annual budget for such an effort would approach $100,000 including the salaries of a full time professional and secretary.

Thus, one major advantage of using intermediaries, such as state offices, is the avoidance of the high start up costs of a direct marketing program. A second advantage of using intermediaries is that they are closer to the ultimate customer and can therefore do a better job of making the customer see how the V-TECS catalog can meet the customer's needs. And, of course, if the intermediary is the state agency in charge of vocational education, then the intermediary can tie the sale of catalogs to other vocational education programs in the state.

In the business world most firms start out by using intermediaries to market their products. But as sales expand, many firms replace those intermediaries with their own sales organizations. Independent dealers are replaced by the producer's own sales offices. This happens because the producer decides that the intermediary is not devoting sufficient time or effort to the producer's product.

If V-TECS continues to grow, it, too, may at some point decide that the state level intermediaries are not able to give V-TECS the time or effort that is needed. At that point, the V-TECS board may decide to eliminate those intermediaries and replace them with personnel who work full time for V-TECS and are assigned to work the sales territory formerly served by the state intermediary.

## G. Physical Distribution

The V-TECS marketing program should consider the possibility of producing catalogs for inventory at one central location. The reason for this is the cost savings of volume production runs. For example, a run of 500 copies of a 200 page catalog with a slick cover would cost $5.37 per catalog in July 1980. A production run of 5,000 copies of the same catalog would cost $3.57 per catalog.[3] No individual state would have sufficient market to justify printing 5,000 copies; few states could justify more than 500. But for all of the states together, the market could justify up to 5,000 copies.

Of course, it would be possible to print 5,000 copies and distribute them to the states for distribution and holding in inventory. But a larger total inventory would be required if each state held its own. A central inventory for the whole nation would require fewer catalogs since one state's excessive estimate of the number needed would be offset by another's insufficient estimate.

## H. Promotion

### 1. General Considerations

In marketing the term promotion refers to the whole set of tools used in persuasive communication between seller and potential buyer. There are four basic categories of promotion tools:

1. Publicity
2. Sales Promotion
3. Advertising
4. Personal Selling

The first two categories are discussed in this section. The last two are covered in subsequent sections.

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[3] Based on estimates from 3 Illinois printers in July, 1980.

Publicity refers to communications for which the seller does not pay directly. A newspaper story about the seller would be an example; a television news interview would be another example. If the publicity is favorable, the audience may develop a positive image of the seller and that image may contribute to a later buying decision.

V-TECS could seek to capitalize on the promotional power of favorable publicity. Following are possible V-TECS actions which might occasionally reach the public in a publicity format:

1. Making public announcements of the release of each new catalog
2. Holding conferences on topics related to performance based vocational education and providing the press with advance information and reports of what happened
3. Releasing news bulletins regarding success stories that involve the use of V-TECS products

Sales promotion is the second of the four categories of promotional tools. Sales promotion is a catch-all term for everything that is not publicity, advertising or personal selling. Some of the many sales promotion tools found in private business are:

1. Conducting contests
2. Printing "catalogs" that list and describe company products
3. Having executives give speeches to public groups
4. Offering trading stamps
5. Putting on trade exhibits
6. Printing sales literature
7. Giving away free samples of the product
8. Giving away pencils, ash trays, calendars, etc. with the company's name prominently displayed
9. Making highly visible charitable contributions

As is the case with publicity, these sales promotion tools serve primarily to make potential customers aware of the existence of the seller and the product. They also generate a generally positive feeling about the seller and product.

The V-TECS marketing effort has already made effective use of one of the above tools. The sponsorship of a V-TECS booth at the 1980 convention of the American Vocational Association appears to have been a highly successful use of the trade exhibit tool. This success should be considered for permanent inclusion in the marketing program.

Another sales promotion tool that might work for V-TECS is the establishment of an awards program for deserving vocational educators. One or more awards could be given to local, state or national leaders in performance based vocational education. With proper staging, the awards ceremony could become a prestigious event which gets the nation's vocational education leaders involved with V-TECS and provides an annual flurry of favorable publicity.

2. Direct Mail

One promotional tool that deserves special attention is direct mail solicitation of catalog purchases. This tool can be highly effective in situations where the target customer group can be pinpointed and mailing addresses can be easily obtained. Such is the case for the V-TECS catalog. Address labels for school administrators and vocational teachers can be purchased for as low as $33 per 1,000 names. The list of names can be specified by state and by specialty taught.

Periodic direct mailings could be handled by assigning existing staff to the task on a part time basis. The V-TECS marketing study team estimates that at costs prevailing in February 1981, a mailing of 27,000 direct mail pieces would cost approximately $7,000. This includes the cost of postage out, return postage (with orders), labels, envelopes, stationery, 3 enclosed brochures and order forms, five days of professional staff time and 160 hours of secretarial and clerical time.

If 20 percent of the potential customers placed an order the direct mailing would produce orders from 5,400 persons. If the typical order were for only one V-TECS catalog, and if the price yielded a $5.00 profit to V-TECS, the mailing would produce an income of $27,000, more than enough to justify the mailing. Obviously a higher markup would produce a larger income; a lower markup would yield less income. But the example does indicate the potential payoff to the use of direct mail as a promotional tool.

3. Membership Promotion Tools

Another area of promotion that should be given close scrutiny by V-TECS consists of the set of promotional devices that would add to the attractiveness of membersip. Some of the programs that might be tried are:

1. An Annual Convention that combines social with motivational and educational events (perhaps the awards program mentioned earlier could be tied in with the convention)
2. A newsletter
3. A program of seminars for persons interested in the types of things that V-TECS does
4. The formation of advisory groups

Membership promotion tools may be particularly important in the case of less than full membership categories. Virtually every group except state agencies would join V-TECS as either an associate or affiliate member. Hence, such widely varied potential members as teachers, private businesses, local education agencies, federal agencies, and universities would be the highest priority targets of the membership promotion tools.

These potential associate or affiliate members might be motivated by (1) a desire to demonstrate support for performance based vocational technical education (PBVTE), (2) a desire to become actively involved in the PBVTE movement, (3) a desire to be recognized for contributions in the PBVTE field, (4) a desire to keep abreast of developments in PBVTE, and (5) a desire to meet others involved in the effort and to exchange views with them. The promotional tools suggested above plus others yet to be discovered by V-TECS might appeal to one or more of these motives and thereby cause an increase in associate membership.

## I. Advertising

Advertising can play an important role in the V-TECS marketing program in two fundamental ways. First, advertising can be used to induce potential customers to place immediate orders. Second, advertising can be used to create a favorable opinion of V-TECS so that at some later date a purchase will be more likely to occur.

In developing an advertising program, V-TECS must answer the following questions:

1. How much should be spent for advertising?
2. What message and mode of presentation should be used?
3. What media should be used?
4. How should the advertising effort be spread over the course of the year?

In addition, V-TECS will need to choose a method for evaluating the effectiveness of its advertising.

The V-TECS marketing study did not attempt to answer these questions. That job was beyond the scope of the present study. However, the marketing study team did, in the course of its study of the demand for catalogs, come up with several advertising themes that are take-offs on classic commercial advertising campaigns of the past. Samples 1 through 7 present examples of such themes. In all cases, the reader can find a copy of the great advertisement used as a model directly following the description of the V-TECS advertisement.[4]

A review of the 7 examples of possible advertising themes suggests that V-TECS has a product which lends itself to some potentially exciting and highly effective advertising.

## J. Personal Selling[5]

Personal selling is appropriate in cases where the seller has a complex story to tell and/or the dollar volume of sales is sufficiently large to cover the cost of the salesperson. Personal selling would certainly be the appropriate tool for sales of catalogs to state agencies at the $4,000 to $6,000 price range discussed in Chapter Two. Personal selling might be appropriate at the school level if the school had sufficient number of vocational programs. For example, a sale of 15 catalogs at a $30 markup would produce $450, enough to pay a salesperson's salary and expenses and leave a small

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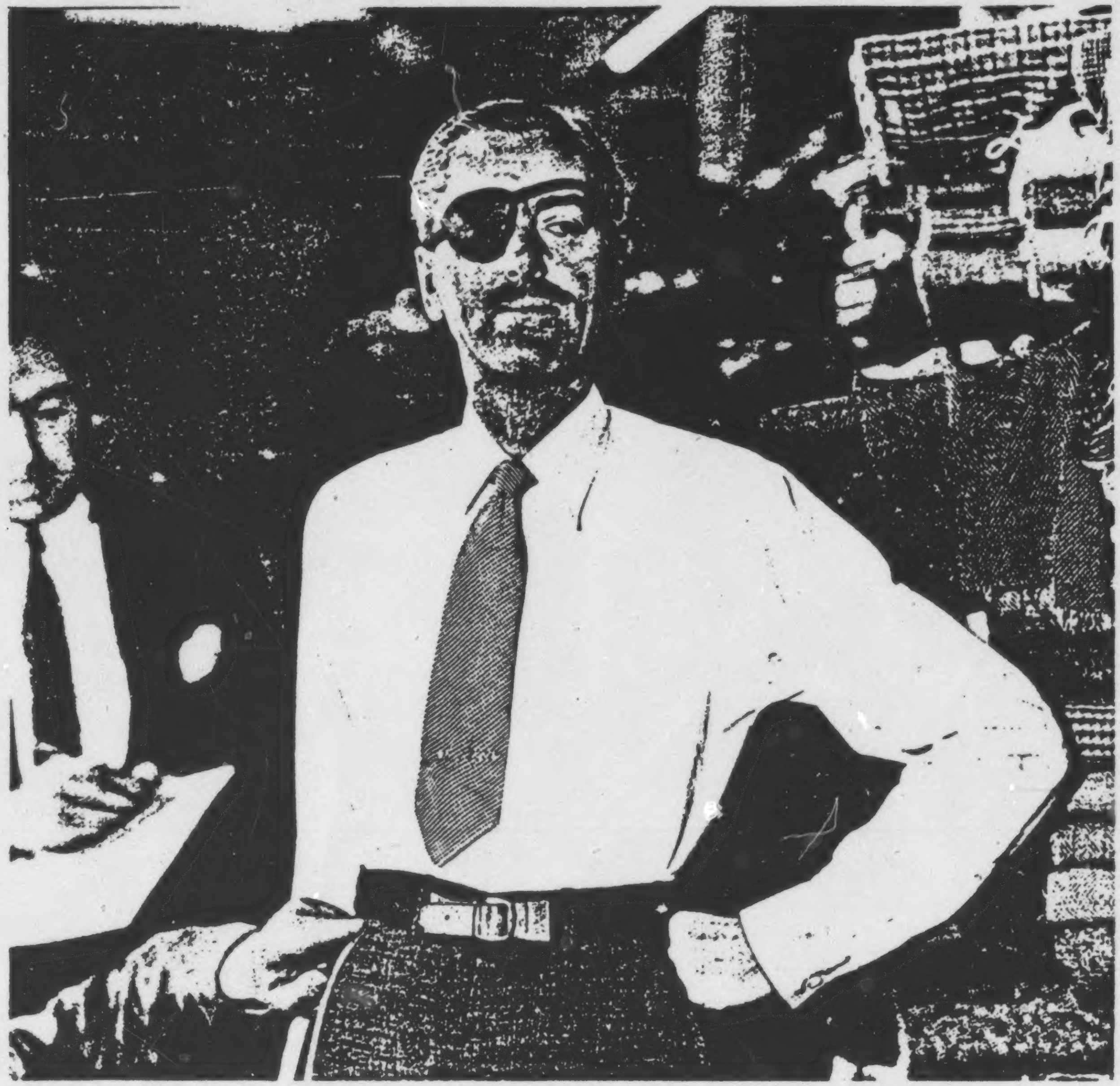
[4] The copies of the 7 great advertisements come from: Julian L. Watkins, The 100 Greatest Advertisements, New York, Dover Publications, 1959. They are reproduced in the V-TECS marketing study with the permission of Dover Publications.

[5] In the process of developing the V-TECS marketing study, one member of the team, Dr. Richard Nordstrom, developed a personal selling guide for use by V-TECS. That guide has been delivered separately to Mr. Victor Harville of the V-TECS staff.

## V-TECS ADVERTISEMENT--SAMPLE 1

| | |
|---|---|
| Great Advertisement Used as a Model: | THE MAN IN THE HATHAWAY SHIRT |
| V-TECS Advertisement Headline: | THE EDUCATOR WHO USES V-TECS CATALOGS |
| V-TECS Advertisement Visualization: | Show a professional-looking Vocational Educator working with one or two students |
| V-TECS Advertisement Copy: | Emphasizes the selling points of performance based vocational education. Praise educators who use PBVTE. State that V-TECS catalogs are an essential tool for those educators who use PBVTE. |



# The man in the Hathaway shirt

AMERICAN MEN are beginning to realize that it is ridiculous to buy good suits and then spoil the effect by wearing an ordinary, mass-produced shirt. Hence the growing popularity of HATHAWAY shirts, which are in a class by themselves.

HATHAWAY shirts *wear* infinitely longer—a matter of years. They make you look younger and more distinguished, because of the subtle way HATHAWAY cut collars. The whole shirt is tailored more *generously*, and is therefore more *comfortable*. The tails are longer, and stay in your trousers. The buttons are mother-of-pearl. Even the stitching has an ante-bellum elegance about it.

Above all, HATHAWAY make their shirts of remarkable *fabrics*, collected from the four corners of the earth—Viyella and Aertex from England, woolen taffeta from Scotland, Sea Island cotton from the West Indies, hand-woven madras from India, broadcloth from Manchester, linen batiste from Paris, hand-blocked silks from England, exclusive cottons from the best weavers in America. You will get a great deal of quiet satisfaction out of wearing shirts which are in such impeccable taste.

HATHAWAY shirts are made by a small company of dedicated craftsmen in the little town of Waterville, Maine. They have been at it, man and boy, for one hundred and fifteen years.

At better stores everywhere, or write C. F. HATHAWAY, Waterville, Maine, for the name of your nearest store. In New York, telephone MU 9-4157. Prices from $5.95 to $25.00.

## V-TECS ADVERTISEMENT--SAMPLE 2

| | |
|---|---|
| Great Advertisement Used as Model: | THE NEW FORD CAR--AN ANNOUNCEMENT OF UNUSUAL IMPORTANCE TO EVERY AUTOMOBILE OWNER<br>By Henry Ford |
| V-TECS Advertisment Headline: | TWENTY NEW V-TECS CATALOGS--An Announcement of Unusual Importance to Every Professional Educator |
| V-TECS Advertisement Visualization: | Use a photograph of a prominent vocational educator who is associated with performance based vocational-technical education. One possibility would be to use the superintendent of public instruction in one of the member states |
| V-TECS Advertisement Copy: | Identify the person whose picture is shown. Have the copy be a message from him/her. Explain the value of the catalogs and stress the fact that every time a new catalog is issued, it is an important event because the content of the catalog is crucial to the development of performance based curricula. List the new catalogs at the bottom of the advertisement and, if possible, provide an order form. |

# THE NEW FORD CAR

## *An announcement of unusual importance to every automobile owner*

### by HENRY FORD

“Nineteen years ago we made and sold the first Model T Ford car. In announcing it to the public we said:

*“‘We will build a motor car for the great multitude. It will be large enough for the family, but small enough for the individual to run and care for. It will be constructed of the best materials, by the best men to be hired, after the simplest designs modern engineering can devise. But it will be so low in price that no man making a good salary will be unable to own one.’*

“If I were starting in business today, or asked to restate my policy, I would not change one sentence or one word of that original announcement. In plain, simple language it gives the reason for the very existence of the Ford Motor Company and explains its growth.

“In the last nineteen years we have made 15,000,000 Ford cars and added to the world nearly 300,000,000 mobile horse-power. Yet I do not consider the machines which bear my name simply as machines. I take them as concrete evidence of the working out of a theory of business which I hope is something more than a theory of business—a theory that looks toward making this world a better place in which to live.

“The Model T Ford car was a pioneer. There was no conscious public need of motor cars when we first conceived it. There were few good roads and only the adventurous few could be induced to buy an automobile.

“The Ford car blazed the way for the motor industry and started the movement for good roads. It broke down the barriers of time and distance and helped to place education within the reach of all. It gave people more leisure. It helped people everywhere to do more and better work in less time and enjoy doing it. It did a great deal, I am sure, to promote the growth and progress of this country.

“We are still proud of the record of the Model T Ford car. If we were not, we would not have continued to manufacture it so long. But 1927 is not 1908. It is not 1915. It is not even 1926.

### *We have built a new car to meet modern conditions*

“We realize that conditions in this country have so greatly changed in the last few years that further refinement in motor car construction is desirable. So we have built a new car. To put it simply—we have built a new and different Ford to meet new and different conditions.

“We believe the new Ford car, which will be officially announced on Friday of this week, is as great an improvement in motor car building as the Model T Ford was in 1908.

### *Smart new low lines and beautiful colors*

“The new Ford is more than a car for the requirements of today. It goes farther than that. It anticipates the needs of 1928, of 1929, of 1930.

“The new Ford car is radically different from Model T. Yet the basic Ford principles of economy of production and quality of product have been retained. There is nothing quite like the new Ford anywhere in quality and price.

“The new Ford has exceptional beauty of line and color because beauty of line and color has come to be considered, and I think rightly, a necessity in a motor car today. Equally important is the mechanical beauty of the engine. Let us not forget this mechanical beauty when we consider the beauty of the new Ford.

“The new Ford has unusual speed for a low-price car because present-day conditions require unusual speed.

“The world moves more quickly than it used to. There are only so many hours in the day and there is much to be done.

“Fifty and sixty miles an hour are desired today where thirty and forty would have satisfied in 1908. So we are giving you this new speed.

### *Quiet and smooth-running at all speeds*

“The new Ford will ride comfortably at fifty and sixty miles an hour. It has actually done sixty-five miles an hour in road tests.

“Since modern conditions demand more speed, they also demand better brakes to balance this speed. So we are giving you four-wheel brakes in the new Ford.

“The new Ford will be quiet and smooth-running at all speeds and you will find it even easier to handle in traffic than the old Model T Ford.

“The new Ford has durability because durability is the very heart of motor car value. The Ford car has always been known as a car that will take you there and bring you back. The new Ford will not only do that, but it will do it in good style. You will be proud of the new Ford.

“This new Ford car has not been planned and made in a day. Our engineers began work on it several years ago and it has been in my mind much longer than that. We make automobiles quickly when we get in production. But we take a long time planning them. Nothing can hurry us in that. We spent twelve years in perfecting our former Model T Ford car before we offered it to the public. It is not conceivable that we should have put this new Ford car on the market until we were sure that it was mechanically correct in every detail.

“Every part of it has been tested and re-tested. There is no guessing as to whether it will be a successful model. It has to be. There is no way it can escape being so, for it represents the sum total of all we have learned about motor car building in the making of 15,000,000 automobiles.

### *The new Ford will sell at a low price*

“The price of the new Ford is low in accordance with the established Ford policy. I hold that it is better to sell a large number of cars at a reasonably small margin of profit than to sell a few cars at a large margin of profit.

“We never forget that people who buy Ford cars are the people who helped to make this business big. It has always been our policy to share our profits with our customers. In one year our profits were so much larger than we expected that we voluntarily returned $50 to each purchaser of a car. We could never have done that if this business had been conducted for the sole benefit of stockholders rather than to render service to the public.

“No other automobile can duplicate the new Ford car at the Ford price because no other manufacturer does business the way we do.

*“We make our own steel—we make our own glass—we mine our own coal—we make virtually every part used in the Ford car. But we do not charge a profit on any of these items or from these operations. We would not be playing fair with the public if we did so. Our only business is the automobile business. Our only profit is on the automobile we sell.*

“We are able to sell this new Ford car at a low price because we have found new ways to give you greater value without a great increase in our own costs.

“We did not set out to make a new car to sell at such-and-such a figure. We decided on the kind of car we wanted to make and then found ways to produce it at a low price.

“The new Ford car, as I have said, will be officially announced on Friday of this week. In appearance, in performance, in comfort, in safety, in all that goes to make a good car, it will bear out everything I have said here. We consider it our most important contribution thus far to the progress of the motor industry, to the prosperity of the country, and to the daily welfare of millions of people.”

Henry Ford

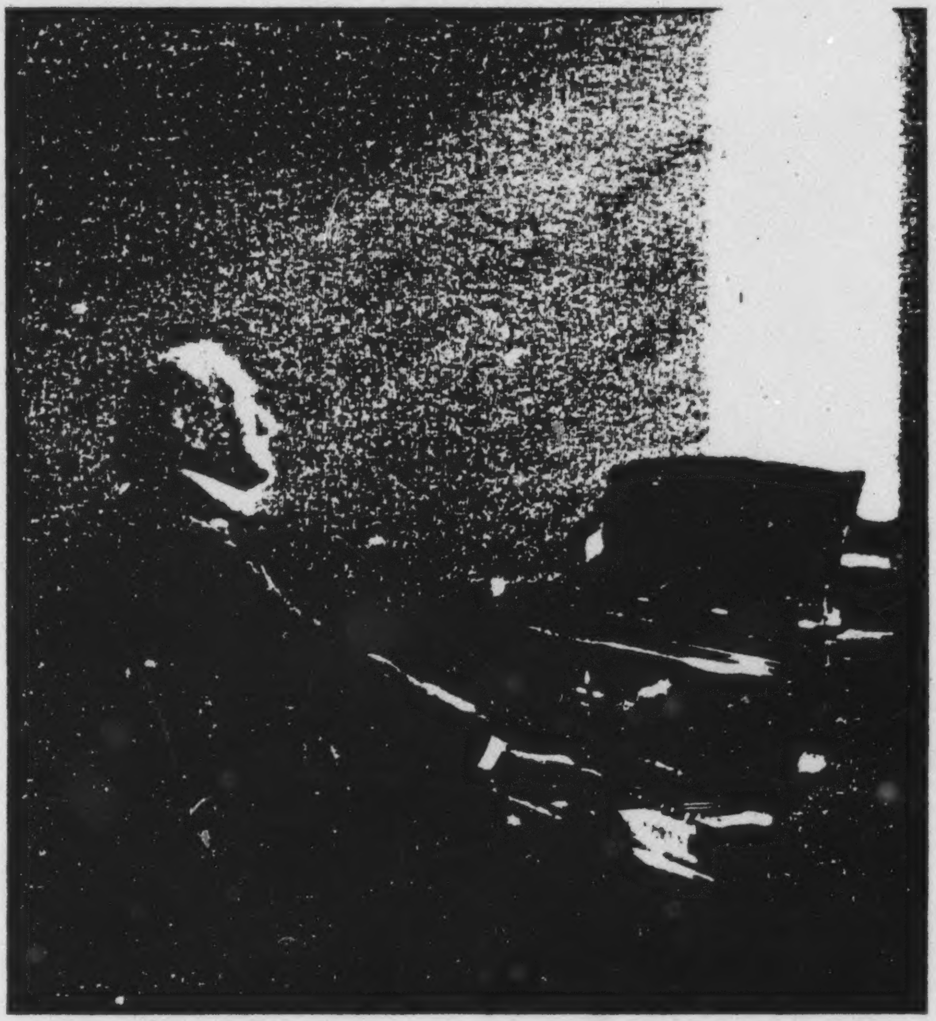
**FORD MOTOR COMPANY**
Detroit, Michigan

© 1927, Ford Motor Company

## V-TECS ADVERTISEMENT--SAMPLE 3

| | |
|---|---|
| Great Advertisement Used as Model: | STEINWAY--IS THE INSTRUMENT OF THE IMMORTALS |
| V-TECS Advertisement Headline: | THE V-TECS CATALOG--Indispensable Tool of the Professional Vocational Educator |
| (Two Possible Variations): | 1. Replace "Professional" with "Performance Based"<br>2. Replace "Educator" with "Teacher" |
| V-TECS Advertisement Visualization: | Show a V-TECS catalog on a teacher's desk or bookshelf. |
| V-TECS Advertisement Copy: | "The professional vocational educator teaches the skills which students will need on the job. To be certain that the right competencies are being taught, professional educators consult the most recent studies of tasks actually performed by incumbent workers. The one and only authoritative source of that information is the V-TECS catalog. That's why professional vocational educators find the V-TECS catalog an indispensable tool for their work." |
| Other: | Be sure to give an address to which the reader can write for more information |

STEINWAY



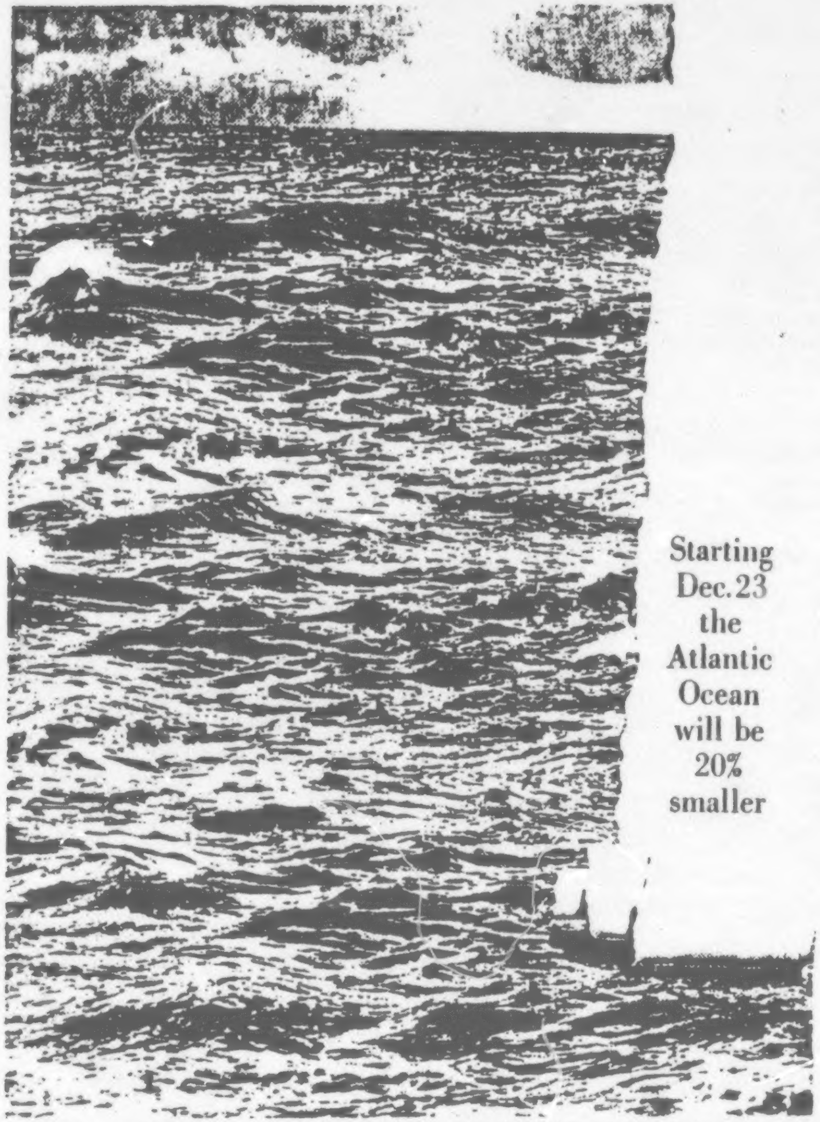
*The Instrument of the Immortals*

There has been but one supreme piano in the history of music. In the days of Liszt and Wagner, of Rubinstein and Berlioz, the preeminence of the Steinway was as unquestioned as it is today. It stood then, as it stands now, the chosen instrument of the masters—the inevitable preference wherever great music is understood and esteemed.

STEINWAY & SONS, Steinway Hall, 107-109 E. 14th Street, New York
*Subway Express Stations at the Door*

## V-TECS ADVERTISEMENT--SAMPLE 4

| | |
|---|---|
| Great Advertisement Used as a Model: | JUST WHAT DOES A TRAVEL AGENT DO FOR YOU? |
| V-TECS Advertisement Headline: | SIX REASONS WHY YOU SHOULD USE V-TECS CATALOGS |
| V-TECS Advertisement Visualization: | Use six photos of six different vocational educators who use V-TECS catalogs and are willing to give a testimonial |
| V-TECS Advertisement Copy: | Underneath each of the six photos, give one reason for using the catalog. Six commonly cited uses are:<br>1. To Develop New Courses<br>2. To Evaluate Existing Courses<br>3. To Update Existing Courses<br>4. To Plan Tool and Equipment Purchases<br>5. To Develop Criterion Referenced Tests<br>6. To Plan Vocational Education Programs<br><br>Two others that commonly appear are:<br>1. As a Student Resource in Cooperative Programs<br>2. As a Tool for Articulation |
| Other: | The advertisement could include a detachable order sheet and a complete or partial list of available catalogs |



Starting
Dec. 23
the
Atlantic
Ocean
will be
20%
smaller

Watch for the inauguration of the first jet-prop service across the Atlantic, introducing the Bristol Britannia, starting Dec. 23

EL AL
ISRAEL AIRLINES

[illegible]

# Just what does a travel agent do for you?

## (and who pays him?)

**He has all your headaches.**

[illegible]

**He gets your plane tickets.**

[illegible]

**He gets your hotel reservations.**

[illegible]

**He acts as your financial advisor.**

[illegible]

**He knows the best places.**

[illegible]

**He can tell you what to expect.**

[illegible]

Prepared as a service to the traveling public by EL AL ISRAEL AIRLINES, 610 Fifth Avenue, New York [illegible] EL·AL [illegible] London, Paris and Tel Aviv

## V-TECS ADVERTISEMENT--SAMPLE 5

Great Advertisement Used as a Model: THE PENALTY OF LEADERSHIP

V-TECS Advertisement Headline (if legal): THE PENALTY OF LEADERSHIP

V-TECS Advertisement Visualization: A slogan enclosed in an ellipse at the top of the advertisement as in the Cadillac model or a slogan placed at the bottom of the ad as in the Cadillac model. Three possible slogans are:

1. The Penalty of Vocational Education Leadership
2. "V-TECS Catalogs--The Standard for PBVTE"
3. "V-TECS--Leading the Way Toward a Better World of Performance Based Vocational-Technical Education"

V-TECS Advertisement Copy: Explain how performance based vocational education leads to students better able to succeed in the world of work. State that using a V-TECS catalog to develop a performance based curriculum will produce the highest quality education. Point out the fact that the leaders who use the catalogs pay the penalty of putting an extra effort into their courses. Then point out the rewards of being a leader (or praise the leaders).

Other: The advertisement should list the member states that are courageously shouldering the burden of leadership

Cadillac
Standard of the World

# The PENALTY OF LEADERSHIP

IN every field of human endeavor, he that is first must perpetually live in the white light of publicity. ¶Whether the leadership be vested in a man or in a manufactured product, emulation and envy are ever at work. ¶In art, in literature, in music, in industry, the reward and the punishment are always the same. ¶The reward is widespread recognition; the punishment, fierce denial and detraction. ¶When a man's work becomes a standard for the whole world, it also becomes a target for the shafts of the envious few. ¶If his work be merely mediocre, he will be left severely alone—if he achieve a masterpiece, it will set a million tongues a-wagging. ¶Jealousy does not protrude its forked tongue at the artist who produces a commonplace painting. ¶Whatsoever you write, or paint, or play, or sing, or build, no one will strive to surpass, or to slander you, unless your work be stamped with the seal of genius. ¶Long, long after a great work or a good work has been done, those who are disappointed or envious continue to cry out that it can not be done. ¶Spiteful little voices in the domain of art were raised against our own Whistler as a mountebank, long after the big world had acclaimed him its greatest artistic genius. ¶Multitudes flocked to Bayreuth to worship at the musical shrine of Wagner, while the little group of those whom he had dethroned and displaced argued angrily that he was no musician at all. ¶The little world continued to protest that Fulton could never build a steamboat, while the big world flocked to the river banks to see his boat steam by. ¶The leader is assailed because he is a leader, and the effort to equal him is merely added proof of that leadership. ¶Failing to equal or to excel, the follower seeks to depreciate and to destroy—but only confirms once more the superiority of that which he strives to supplant. ¶There is nothing new in this. ¶It is as old as the world and as old as the human passions—envy, fear, greed, ambition, and the desire to surpass. ¶And it all avails nothing. ¶If the leader truly leads, he remains—the leader. ¶Master-poet, master-painter, master-workman, each in his turn is assailed, and each holds his laurels through the ages. ¶That which is good or great makes itself known, no matter how loud the clamor of denial. ¶That which deserves to live—lives.

Cadillac Motor Car Co. Detroit. Mich.

Copyright 1914, Cadillac Motor Car Co.

## V-TECS ADVERTISEMENT--SAMPLE 6

Great Advertisement Used as a Model: THE PRICELESS INGREDIENT

V-TECS Advertisement Headline (if legal): THE PRICELESS INGREDIENT IN VOCATIONAL EDUCATION

V-TECS Advertisement Visualization: Photo of a collection of V-TECS catalogs

V-TECS Advertisement Copy: A quotation at the top. The quotation might be B.R. West's statement that, "The single deterrent to widespread adoption of performance based vocational education has been the lack of valid information upon which to make decisions, plan programs, develop the necessary curricula, and evaluate the system. V-TECS now provides this information.

The text which follows could trace the accomplishments of V-TECS, showing that it is a going concern and that many vocational educators have already jumped on the V-TECS bandwagon. The text should repeatedly stress the fact that the information in the catalog IS THE PRICELESS INGREDIENT OF PBVTE. The text should end with an appeal to the reader to get involved either by ordering catalogs, taking out an affiliate membership, or urging the reader's state to become a member. THE ADVERTISEMENT SHOULD LIST THE MEMBER STATES.

# The PRICELESS INGREDIENT

*In the city of Bagdad lived Hakeem, the Wise One, and many people went to him for counsel, which he gave freely to all, asking nothing in return.*

*There came to him a young man, who had spent much but got little, and said: "Tell me, Wise One, what shall I do to receive the most for that which I spend?"*

*Hakeem answered, "A thing that is bought or sold has no value unless it contain that which cannot be bought or sold. Look for the Priceless Ingredient."*

*"But, what is this Priceless Ingredient?" asked the young man.*

*Spoke then the Wise One, "My son, the Priceless Ingredient of every product in the market-place is the Honor and Integrity of him who makes it. Consider his name before you buy."*

Three words of this old tale—"The Priceless Ingredient"—tell the story of the House of Squibb, revealing the secret of its service and success.

E. R. Squibb & Sons was founded in 1858 by Dr. Edward R. Squibb, a physician and chemist of high principles and ideals. He was inspired, not by hope of financial gain (for he had money enough for all his needs), but by professional duty and personal honor. His aim was to set a new and higher standard in chemical and pharmaceutical manufacture, by making products of greater purity than had yet been known.

Within three years the Squibb Laboratories had attained a position of leadership. In 1861 the Government of the United States turned confidently to Squibb for products needed for a million men in our Civil War. That was sixty years ago. The reputation so early won, the House of Squibb holds today inviolate and values far above profits.

In 1917, as in 1861, the United States Government again turned confidently to Squibb for products needed for millions of men in the World War, and after the War, conferred upon the House of Squibb the Award for Distinguished Service.

For more than half a century the name Squibb has been recognized as full guaranty of skill, knowledge and honor in the manufacture of chemical and pharmaceutical products made exclusively for the medical profession and used only by the physician and the surgeon.

The name Squibb on HOUSEHOLD PRODUCTS is equally valued as positive assurance of true purity and reliability.

---

**Squibb's Bicarbonate of Soda**—exceedingly pure, therefore without bitter taste.

**Squibb's Epsom Salt**—free from impurities. Preferred also for taste.

**Squibb's Sodium Phosphate**—a specially purified product, free from arsenic, therefore safe.

**Squibb's Milk of Magnesia**—highest quality. Pleasant and effective.

**Squibb's Cod Liver Oil**—selected finest Norwegian; cold pressed; pure in taste. Rich in vitamine.

**Squibb's Olive Oil**—selected oil from Southern France. Absolutely pure. (Sold only through druggists.)

**Squibb's Sugar of Milk**—specially refined for preparing infants' food. Quickly soluble. In sealed tins.

**Squibb's Boric Acid**—pure and perfectly soluble. Soft powder for dusting; granular form for solutions.

**Squibb's Castor Oil**—specially refined, bland in taste; dependable.

**Squibb's Stearate of Zinc**—a soft and protective powder of highest purity.

**Squibb's Magnesia Dental Cream**—made from Squibb's Milk of Magnesia. Contains no soap or other detrimental substance. Corrects mouth acidity.

**Squibb's Talcum Powder**—Carnation, Violet, Boudoir, and Unscented. The talcum powder *par excellence.*

**Squibb's Cold Cream**—an exquisite preparation of correct composition for the care of the skin.

Sold by reliable druggists everywhere, in original sealed packages.
The "Priceless Ingredient" of every product is the honor and integrity of its maker.

# SQUIBB

RELIABILITY
UNIFORMITY PURITY EFFICACY

## V-TECS ADVERTISEMENT--SAMPLE 7

| | |
|---|---|
| Great Advertisement Used as a Model: | TELEPHONE SERVICE, A PUBLIC TRUST |
| V-TECS Advertisement Headline: | V-TECS, A PUBLIC TRUST |
| V-TECS Advertisement Visualization: | Photo of the V-TECS board of directors at a meeting. |
| V-TECS Advertisement Copy: | Describe V-TECS' goals, accomplishments, and quality controls. |
| Other: | Somewhere in the ad there should be a listing of the "noble" member states who are serving the public so well. |

# Telephone service, a public trust

*An Advertisement of the*
*American Telephone and Telegraph Company*

The widespread ownership of the Bell Telephone System places an obligation on its management to guard the savings of its hundreds of thousands of stockholders.

Its responsibility for so large a part of the country's telephone service imposes an obligation that the service shall always be adequate, dependable and satisfactory to the user.

The only sound policy that will meet these obligations is to continue to furnish the best possible service at the lowest cost consistent with financial safety.

There is then in the Bell System no incentive to earn speculative or large profits. Earnings must be sufficient to assure the best possible service and the financial integrity of the business. Anything in excess of these requirements goes toward extending the service or keeping down the rates.

This is fundamental in the policy of the company.

The Bell System's ideal is the same as that of the public it serves—the most telephone service and the best, at the least cost to the user. It accepts its responsibility for a nation-wide telephone service as a public trust.

profit for V-TECS. (However, direct mail is likely to be more cost effective in this case.)

Unlike advertising, personal selling can tailor the promotion message to the needs of the customer. The sales representative is a problem solver for the target customer. The professional representative does four things in his or her sales presentation:

1. Determines the prospect's needs
2. Determines ways in which the V-TECS product can meet those needs
3. Arouses the prospect's desire to use the catalog to meet the needs
4. Gets the order

One of the advantages of personal selling is that the salesperson can learn of the prospect's objections and then try to counter them. One of the most effective tools that can be used in countering objections is testimonials from trustworthy past customers. The V-TECS marketing study unearthed two such testimonials during the course of the project's survey work. They are reproduced on the following pages as samples 1 and 2.

## K. Market Research

The final component of the marketing program is market research. Market research is needed to test the assumptions on which the marketing program is based. And market research is needed to plan new product offerings, new advertising themes, new marketing policies and assaults on new market segments.

Some of the market research effort can be conducted at low cost merely by means of intelligent record keeping. Records of the results of direct mailings, for example, can produce figures showing the expected response rates from different population groups under various circumstances.

## V-TECS CATALOG TESTIMONIAL - SAMPLE 1

Using the V-TECS catalog as a guide, I was able to develop an introductory welding course that fits our specific needs here at Clinton. With it, I identified the basic skills that any welder needs, conducted a task analysis and developed a course outline and lesson basics. The catalogs meet our needs because they contain information that would be difficult to get on your own such as the specific tools that you need and how often you need them, and they describe current methods and procedures used in the industry. One of their greatest benefits lies in their timeliness because they're updated frequently--and this is really important in high technology fields such as welding, machine shop and computer and word processing courses. In fact, I used the Welder Catalog as 'my own little advisory council for the welding field.'

The catalog's flexibility enables me to meet students' special needs. I have modified the pure pass or fail competency based concept to our semester system in an effort to individualize my courses as much as possible.

Mr. Tad Foster, Vocational Director
Clinton High School
Rt. 54-W
Clinton, Illinois 61727
217/935-8337

(He works with twelve teachers in a high school with an approximate enrollment of 700 students.)

## V-TECS CATALOG TESTIMONIAL - SAMPLE 2

We've found the V-TECS' catalogs to be an important tool in the individualized approach to vocational training. With them, courses can be tailored to the student's particular needs and enable him/her to move at his/her particular rate. V-TECS catalogs are also invaluable aids for supplementary information to be used in general curriculum development. In one workshop last summer, we used them as a resource in developing a competency based series of units for our five areas of basic industrial education--power, electrical, drafting, metals and wood.

Ms. Sharon Linden, Director of Instruction
Fine and Practical Arts
Homewood-Flossmoor High School
Flossmoor, Illinois 60422
312/799-3000

(She supervises 25 teachers in a high school with an enrollment of over 2000 students.)

Records showing the characteristics of actual customers can provide a handy way of profiling the traits of the typical V-TECS customer. Such records can also provide insights into such issues as the average size of purchase, the most likely time of purchase, and the most frequently ordered catalogs.

Other aspects of market research will require special efforts. Surveys of customer satisfaction levels is one example. Market tests of new packaging ideas is another. Market tests of advertising copy is a third example.

### L. Administration

The way in which the marketing program is administered will have much to do with its ultimate success. A minimum requirement for a serious marketing effort would be to have one professional staff member assigned to marketing on a full time basis. This staff member would coordinate the advertising and other promotional activities, the selling efforts, marketing research, and the constant revision of the market plan and program. This person would have to do much of the work that in larger organizations would be divided among several professionals. It would undoubtedly be necessary for this person to contract with outside agencies (e.g. advertising agencies) to do various types of specialized work. Hence, a substantial contractual services budget would be needed.

## III. CONCLUSION

This chapter is not intended to be a detailed discussion of the V-TECS marketing plan and program. Instead, the chapter is designed to identify the main elements that should go into the plan and program when they are developed. It is the hope of the authors that V-TECS will eventually develop a plan and program. The social significance of what V-TECS has to offer is great enough to warrant such a commitment from the V-TECS board of directors.

# APPENDIX A

## Problems, Options and Goals

## PROBLEMS, OPTIONS AND GOALS

The purpose of this appendix is to elaborate on the topics of problems and options. The discussion found in this appendix goes into greater detail than Chapter One and shows how the marketing study relates only to a portion of the entire set of problems facing V-TECS.

### I. THE PROBLEMS

The decision to conduct a V-TECS marketing study was based on a desire to stimulate sales of V-TECS catalogs. However, the marketing research team soon discovered that the issue of catalog sales was actually interrelated with other critical issues facing the V-TECS board of directors. Consequently, the study's scope was expanded to take into consideration these other interrelated problems and opportunities.

### A. The Central Problem

The central problem facing V-TECS appears to be the question: WHERE DOES V-TECS GO FROM HERE?

This was becoming an issue in 1980, because of the success of the consortium in meeting its original objectives of catalog development. By that time, a large number of catalogs had been produced and continued production of catalogs was perceived as being much less important to member states than had been the case in the mid 1970s.[1]

The question of future direction was also becoming an issue because of the changing financial situation facing many of the member states.

---

[1] However, an insufficient rate of production of new catalogs was mentioned as a problem by at least one board member.

Funds available to the states for the research activities required by V-TECS were being cut back or were meeting increased competition from alternative uses within the states. The 1980 United States presidential election made this a potentially critical problem as the possibility of major cuts in federal funds for vocational education became a serious issue.

## B. Eight Specific Issues

Included in the central problem of the future direction of V-TECS are a large number of more specific issues and concerns. Interviews conducted by the marketing research team produced the following list of frequently mentioned issues and concerns:

1. The inadequate sales of V-TECS catalogs to nonmember states.
2. The inadequate growth of membership.
3. The potential loss of existing members.
4. The high cost of membership, particularly with regard to the requirement pertaining to catalog development by member states.
5. The desire by some member states to put more state effort into curriculum development and less into catalog development.
6. The inadequate use of existing catalogs within member states.
7. The inadequate expansion of the range of services offered by V-TECS.
8. The inadequate funding of the V-TECS central staff.

## C. The Four Basic Problems

The above mentioned issues and concerns fall into one of the four following problem areas:

1. The problem of finding ways of reducing the annual cost of membership in V-TECS.
2. The problem of finding ways to increase the revenue which supports the central staff.
3. The problem of finding ways to increase the utilization of existing catalogs.
4. The problem of deciding whether or not to expand the range of services provided by V-TECS.

The marketing study focused on the first two problems. The third problem was not included in the study. The fourth problem was studied only briefly.

## II. OPTIONS AVAILABLE TO SOLVE THE PROBLEMS

What are the major strategy options which the V-TECS board can use to solve one or more of the problems?

One option, of course, is the status quo. V-TECS has been very successful in achieving its original objectives of turning out a quality product for which there is a need. The cost of producing the catalogs, given its quality, is lower than any other product on the market.[2]

A second option would be continuation of the status quo with one change--reducing the number of catalogs produced each year. With 85 catalogs already available and several dozen more in various stages of development, V-TECS might cut back to a requirement that each state produce 1 catalog every 450 days rather than the current requirement of 2 catalogs every 450 days.

---

[2] Two other consortia, MAVCC and AAVIM, do task analyses in the process of producing instructional materials. In both cases, the cost of the task analysis is substantially less than in the case of a V-TECS task analysis. However, in both the MAVCC and the AAVIM cases, cost cutting shortcuts are taken. Hence, quality controls are not nearly as extensive as in the case of the development of a V-TECS catalog. There are observers who question whether or not the practical result of the V-TECS method is worth the extra cost.

Four additional broad strategy options involve expansion in one form or another. They are:

1. An effort to expand sales of V-TECS products outside of the consortium.
2. An effort to expand membership in the consortium.
3. An effort to expand the range of products and services offered by V-TECS.
4. An effort to get greater use of V-TECS materials within the member states.

Clearly, these four options can be combined in various ways. For example, V-TECS could simultaneously try to increase catalog sales and recruit new members.

## III. EVALUATION CRITERIA

Evaluation of each option requires a set of evaluation criteria. Such criteria should reflect the goals of the V-TECS membership.

At the present time the V-TECS board of directors is attempting to clarify the consortium's goals. A clear consensus does not yet exist. But the following goals have been clearly articulated by one or more board members.

1. Reduce the annual cost of V-TECS membership to the individual member state.
2. Expand the V-TECS concept to new products and services.
3. Maintain and expand the inventory of up-to-date catalogs and make improvements, where necessary, in the V-TECS methodology.
4. Increase the degree of utilization of V-TECS products within the member states.

5. Play a leadership role in the field of performance based vocational education at the secondary and post secondary levels.

6. Increase V-TECS membership.[3]

These six goals provided the framework for analyzing each of the strategy options in the V-TECS marketing study. However, the emphasis of the study was on the financial and membership implications of each strategy option (Goals 1 and 6).

## IV. CONCLUSION

This appendix has described the problems faced by V-TECS; has listed the major strategy options available as possible solutions to the problems; and has identified criteria for evaluating each of the options. The discussion shows that the marketing study is basically limited to the problems of reducing member costs and increasing revenue for the central staff operation.

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[3] Goal 6 is actually a means of achieving Goal 1 and Goal 5. With more members: (1) the annual cost of membership can be reduced, and (2) the V-TECS influence will reach a larger number of states (thereby making V-TECS more of a leader).

# APPENDIX B

## Current and Potential Demand for V-TECS Products

## CURRENT AND POTENTIAL DEMAND FOR V-TECS PRODUCTS

As is so often the case in marketing studies, the major unanswered question relating to all of the options is: What is the potential demand for the product? The marketing study does not provide a definitive answer. It is impossible to do so without actually conducting marketing experiments. However, it is possible to gather enough data to allow the decision-maker to develop an informed opinion on the possible levels of demand given different strategy options. The presentation of these data is the task of this appendix. Chapter Two utilizes demand estimates based on data found in the following pages. The reader may wish to make different demand assumptions after reading this section.

The appendix is divided into two section. The first section discusses the current and potential demand for catalogs; the second deals with the demand for membership.

### I. THE DEMAND FOR CATALOGS

Several studies of actual usage of V-TECS catalogs have been conducted. The results of these studies provide concrete data regarding current use. Such data can be used to forecast future demand, but care must be taken in making such forecasts because there exist reasons to believe that utilization rates can be raised by increasing the V-TECS selling effort.

The analysis of the demand for catalogs involves consideration of the following questions:

1. What are the benefits of using a V-TECS catalog?
2. What groups of people might use a V-TECS catalog?
3. What percentage of each group is likely to us a V-TECS catalog?

4. How many V-TECS catalogs will the average purchaser buy?
5. How many potential users are there in each user category?
6. What variables can be changed to affect demand?

## A. What Are The Benefits Of Using A V-TECS Catalog?

Several recent surveys of the actual users of V-TECS catalogs make it possible to answer this question with some hard data. One of the surveys was conducted by the marketing study team in the first month of the project. It involved a random sample of local high school personnel who had ordered catalogs during the 1980 fiscal year. The questionnaire was open ended and the sample size was 25 schools. The local users indicated that they used the catalogs for the following purposes:

1. As an aid in curriculum development (29 percent of the respondents).
2. As an aid in curriculum planning (21 percent of the respondents).
3. As a source of new ideas (17 percent of the respondents).
4. As an aid to be used by co-op students (17 percent of the respondents).
5. As a source of motivation for teachers in the district (8 percent of the respondents).
6. To evaluate present course offerings (4 percent of the respondents).
7. To aid in updating course objectives (4 percent of the respondents).
8. To serve as a general reference tool (4 percent of the respondents).
9. To prepare for an evaluation by an outside accrediting agency (4 percent of the respondents).

A second, later survey conducted by the V-TECS marketing study team used a highly structured questionnaire and produced the following responses from local schools:

1. High Schools (useable responses from 24 schools).
    a. 54 percent used the catalogs to develop instructional materials.
    b. 29 percent used the catalogs as a student resource.
2. Secondary Level Area Vocational Centers (useable responses from 20 schools).
    a. 100 percent used the catalogs to develop instructional materials.
    b. 60 percent used the catalogs to evaluate existing courses.
    c. 15 percent used the catalogs as a student resource.
3. Community Colleges (useable responses from 27 schools).
    a. 22 percent used the catalogs to develop instructional materials.
    b. 7 percent used the catalogs as a student resource.

A third survey was conducted by state officials in Wisconsin. Respondents were regional agencies that worked with groups of local educational agencies. This survey produced 14 useable responses from administrators and indicated the following:

1. 50 percent reported using the catalogs to develop instructional materials.
2. 14 percent reported using catalogs for articulation purposes.

A fourth survey was conducted by the V-TECS central staff. That survey asked 16 member state directors how the catalogs were being used. Useable responses were obtained from all 16. The results were as follows:

1. 88 percent reported that catalogs were being used to develop curricula
2. 50 percent reported that catalogs were being used to evaluate existing courses
3. 73 percent reported that catalogs were being used for articulation purposes
4. 88 percent reported that catalogs were being used for in-service training
5. 75 percent reported that catalogs were being used for program planning
6. 25 percent reported that catalogs were being used to identify pre-requisites
7. 44 percent reported that catalogs were being used to develop criterion referenced tests
8. 63 percent reported that catalogs were being used to evaluate student progress
9. 56 percent reported that catalogs were being used to plan tool and equipment purchases

A fifth survey sampled potential business users by means of personal interviews. One part was a convenience sample of 5 large international corporations[1] which produced the following list of possible catalog uses by business:

1. As an aid in designing and conducting performance evaluations of employees
2. As an aid in writing job descriptions
3. As a tool to assist the company in complying with affirmative action requirements

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[1] The firms were: Caterpillar Tractor Company, McGraw Edison, Federal-Mogul Corporation, King Seely, and John Deere.

The second part was a convenience sample of 17 small businesses[2] which identified the following possible catalog uses by business:

1. To develop and revise job descriptions
2. To develop tests to screen job applicants
3. To develop a training program for employees

As noted below, none of the big businesses indicated any desire to purchase V-TECS catalogs. However, 18 percent of the small businesses did indicate an interest in purchasing one or more catalogs.

The surveys produced the expected result. Curriculum development appears to be the most important use of the V-TECS catalog. But there are other uses which might be emphasized in an expanded marketing effort.

### B. Who Might Use The Catalog?

Given the list of possible uses of V-TECS catalogs, a plausible list of potential users would include the following:

1. Curriculum developers at the state and local level (for curriculum development)
2. Classroom teachers (for course development, for course planning, for course evaluations, as a source of new ideas, as a resource for co-op students and possibly for other students, and to develop tests)

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[2] The firms consisted of the following businesses in a small Illinois community: three auto repair shops, one automobile dealer, one chain grocery store, one gasoline service station, one bank, one printing company, one television repair shop, one small appliance repair shop, one office furniture store, one welding shop, one plumbing firm, one retail furniture store, a district hospital, one household appliance store and one automobile dealer.

3. Administrators of local vocational education programs (to motivate teachers, to evaluate teachers and curricula, and prepare for an external evaluation).
4. School boards (to evaluate curricula).
5. Students (to supplement existing instructional materials).

In addition to the school based user groups noted above, there are a number of less obvious potential users. These include:

1. Universities (for use in teacher training programs in the vocational areas).
2. Private businesses (for use in the development of in-house training programs and for developing job descriptions).
3. Public agencies (for use in the development of in-house training programs and for developing job descriptions).
4. CETA and related job placement agencies (for program planning, for orientation of clients, and for evaluation of client skills).
5. Libraries (for use as a general reference tool by library patrons).
6. School guidance counselors (to orient clients).
7. Correctional institutions (for the same types of uses as schools).
8. Vocational rehabilitation offices (for the same types of uses as schools).
9. Equipment manufacturers (for use as a resource in planning user manuals).

### C. What Percentage Of Each User Group Will Use The Catalogs?

The percentage of potential users that will actually acquire and use a V-TECS catalog will vary with the cost of the catalog, the motivation of the potential user, the availability of alternative sources of information found in the catalog, and the size and nature of the marketing effort by member states and the V-TECS central staff.

1. School Based Users

Some insight into potential usage is provided by the several surveys conducted by the marketing study staff. These surveys contacted a random sample of potential users in several different user groups in Illinois to find out what percentage of the user group was actually using V-TECS catalogs. Illinois was selected because it is a V-TECS member state which has made an effort to make local schools aware of the existence of the catalogs and because any school in Illinois that wants to use a catalog has to order the catalog and pay a nominal fee. (The charge equals the cost of photocopying plus shipping and handling. Prices are typically in the $3 to $10 range).

The Illinois surveys produced the following results:

a. 12 percent of the high school vocational program directors had purchased and used V-TECS catalogs (Sample size equaled 43)

b. 19 percent of the community college vocational program directors had purchased and used V-TECS catalogs (Sample size equaled 36)

c. 80 percent of the directors of secondary level area vocational centers had purchased and used V-TECS catalogs (Sample size equaled 25)

d. None of the high school guidance counselors had purchased or used V-TECS catalogs (Sample size equaled 17)

In several of the above cases, a portion of the respondents reported that they were not familiar with the V-TECS catalog.[3] If these respondents were removed from the sample, the percentage using the catalogs would rise in the following three cases:

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[3] The percentages of respondents stating that they were not familiar with V-TECS catalogs were: 61 percent of the high school vocational directors, 94 percent of the high school guidance counselors, 25 percent of the community college vocational directors and 20 percent of the area vocational school directors.

a. Among high school vocational program directors, 21 percent of the respondents would report using catalogs

b. Among community college vocational directors, 26 percent of the respondents would report using catalogs

c. Among directors of secondary level area vocational centers, 100 percent of the respondents would report using catalogs

There would be no change in the percentage of high school guidance counselors using V-TECS catalogs.

The estimates of usage rates presented in the preceding two paragraphs provide a starting point for use in forecasting demand for V-TECS catalogs on the part of the above four user groups. In the first three cases, we have high and low rates that can be used to estimate the percentage of users. The forecaster can use either the high or the low rate or can subjectively pick a rate above, below or between the two rates calculated from the surveys. In the fourth case, high school guidance counselors, it is possible to accept the zero rate of use as truly reflecting potential demand. However, the marketing study team would not recommend such an action without first attempting to create a demand for V-TECS catalogs by counselors. In theory, the best counselors should be using the V-TECS catalog.

The actual utilization rates used in Chapter 2 were: 11 to 18 percent for high school vocational schools, 80 percent for secondary level area vocational centers, 19 to 20 percent for community colleges and zero percent for guidance counselors. These percentages represent the basic results of the surveys, modified slightly to take into account the marketing study team's subjective evaluation of what was most realistic.

It should be emphasized that the percentage of users is likely to vary with the marketing conditions. For example, changes in price, packaging or sales effort might cause a significant increase in the percent of users. The marketing study surveys did investigate this issue by asking potential users how their purchases would change in response to increases or decreases in price. The responses indicated that lowering the price would cause some increase in purchases, but not enough to cause total revenue to increase. In addition, an increase in price would cause some reduction in purchases, but enough respondents would still buy the catalogs to cause total revenue to increase. In other words, if the catalog price were doubled, total sales revenue would increase whereas if the price were cut by 50 percent, total sales revenue would fall. Appendix C presents a variety of calculations showing the revenue potential of different catalog prices.

The marketing study did not attempt to estimate the percentage of users in school based groups other than those identified above. For purposes of eliciting discussion, some calculations were made on the assumptions that 2 to 10 percent of the vocational students would buy a catalog if an adequate marketing effort were made. And similar calculations were made for vocational education teachers, based on the assumption that the percentage using catalogs would range from 10 to 20 percent. This range is superficially plausible since it is very close to what was observed for vocational program directors. But the motivation of directors and teachers is sufficiently different that the marketing study team would caution against accepting the 10 to 20 percent figure without first surveying a sample of teachers.

2. Business Users

As indicated above, the marketing study team conducted personal interviews with a convenience sample of large and small businesses.[4] None of the large businesses indicated an interest in buying catalogs, but 18 percent of the small businesses indicated an interest. Of the total non-random sample of 22 large and small business, 14 percent thus indicated an interest in the catalog.

Because the samples were non-random, the marketing study team decided to make the following subjective estimates of the percentage of businesses that might use the catalogs:

a. A high estimate of 22 percent of the potential buyers
b. A low estimate of 2.2 percent of the potential buyers

This wide range thus makes it possible to examine the implications of two vastly different scenarios for business users.

D. How Many V-TECS Catalogs Will The Average Purchaser Buy?

As becomes apparent from the calculations in Appendix C, the answer to this question can have a major impact on the sale of V-TECS catalogs, given the number of buyers. For example, if the number of catalogs bought by the average high school vocational program director were to rise from 5 to 15, then sales revenue from that customer group would triple with no increase in the number of buyers.

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[4] "Business" is defined to include not-for-profit agencies such as hospitals which offer employment to vocationally trained persons.

The marketing study initially attacked this problem by analyzing the purchasing patterns of a random sample of Illinois purchasers in 1980. The sample consisted of 29 high school vocational program directors. In all 29 cases the buyer only ordered one copy of any given catalog title. But in most cases more than one title was ordered. The average number of titles ordered was 12.4. The range went from 3 purchasers who bought one catalog each, to one purchaser who ordered all available titles. The distribution was bimodal, with one peak at an average of 6 titles per order and a second peak at 20 titles per order.

The average of 12.4 titles per order represented one-fifth of the available titles at the time the orders were placed. Thus a figure of 20 percent of the available titles is one possible number to use in forecasting the number of purchases made by the average secondary school vocational director.

The marketing study also addressed the issue of the number of catalogs bought by each customer in the random sample surveys of high school vocational program directors, community college vocational program directors, and area vocational school directors. In these cases, of course, not all of the respondents had purchased or intended to purchase catalogs. But of those who did place orders in 1980, the average number of titles per order was:

1. For high school vocational directors - 15.6 or 25 percent of available titles.

2. For area vocational centers - 10.7 or 17 percent of available titles.

3. For community colleges - 8.4 or 13 percent of available titles.

These percentages provide another possible set of estimators of future purchasing patterns.

The analyses of the average number of catalogs likely to be purchased was restricted to the above mentioned school based user groups. In the analyses of the material that follows, estimates for other potential user groups will be based on assumptions that are stated at the appropriate places in the analyses.

E. How Many Total Potential Users Are There In Each User Category?

Another piece of information needed for the demand calculations is an estimate of the total number of potential users in each user category. As summarized in Table B-1, the numbers are:

| | | |
|---|---|---|
| 1. | Public comprehensive secondary schools with vocational education programs | 15,729 |
| 2. | Public area vocational centers (secondary) | 1,379 |
| 3. | Private secondary schools | 586 |
| 4. | Community colleges | 1,135 |
| 5. | Colleges and universities | 647 |
| 6. | Public, noncollegiate post secondary schools | 812 |
| 7. | Private noncollegiate post secondary schools | 6,813 |
| 8. | Correctional facilities | 553 |
| 9. | For profit corporations | 2,240,000 |
| 10. | For profit partnerships | 1,150,000 |

| | | |
|---|---|---|
| 11. | For profit proprietorships | 11,350,000 |
| 12. | Vocational-technical students | 19,563,000 |
| 13. | Vocational teachers - secondary levels | 183,507 |
| 14. | Vocational teachers - post secondary level | 80,443 |
| 15. | Vocational teachers - adult level | 124,586 |

The above numbers represent all states in the United States. In the case of the public schools, it is important to know the number of schools in states that are not members of V-TECS. The V-TECS board of directors might prefer to make free distributions to schools in member states while selling catalogs for a profit to public schools in non-member states.

Looking at the numbers of the various potential user groups, one notices some major variations. The largest number of potential users is found in the vocational student category. This is also the group with the most limited ability to pay for catalogs. The smallest number of potential customers is found in the category of correctional institutions.

## F. What Variables Can Be Changed To Affect Demand?

The final set of information needed to estimate demand has to do with the effects of various marketing actions on demand. Technically, demand is defined as the schedule of quantities of catalogs that will be purchased at different prices. Hence, information is needed with regard to how the quantities ordered will vary as the price goes up or down. In addition, V-TECS can stimulate demand through advertising and related sales promotion efforts, through a personal selling effort, through a change in product appearance, and through a change in

## Table B-1
## CUSTOMERS LIKELY TO BUY V-TECS CATALOGS--BY USER CATEGORY

| USER CATEGORY | NUMBER IN U.S.A. | PERCENT LIKELY TO BUY V-TECS CATALOG | NUMBER LIKELY TO BUY V-TECS CATALOG |
|---|---|---|---|
| 1. Schools Offering Vocational Education Programs | | | |
| 1.1 Public Comprehensive or Vocational Schools 1978/79 | 15,729 | 11% to 18% | 1730 to 2831 |
| 1.2 Public Area Vocational Centers (Secondary) 1978/79 | 1,379 | 80% | 1103 |
| 1.3 Private Secondary 1978/79 | 586 | 11% to 18% | 64 to 105 |
| 1.4 Community Colleges 1978/79 | 1,135 | 19% to 25% | 215 to 284 |
| 1.5 Colleges & Univ. with Vocational Prog. 1978/79 | 647 | N.A. | N.A. |
| 1.6 Public Noncollegiate Post Secondary Institutions 1978/79 | 812 | N.A. | N.A. |
| 1.7 Private Noncollegiate Post Secondary Institutions 1978/79 | 6,813 | N.A. | N.A. |
| 2. Public Agencies | | | |
| 2.1 Correctional Facilities with Voc. Ed. 1978/79 | 553 | N.A. | N.A. |
| 2.2 Libraries 1979 | 29,446 | N.A. | N.A. |
| 3. Private Agencies | | | |
| 3.1 Corporations 1977 | 2.24 million | 2.2% to 22% | 49,280 to 492,800 |
| 3.2 Partnerships 1977 | 1.15 million | 2.2% to 22% | 25,300 to 253,000 |
| 3.3 Proprietorships 1977 | 11.35 million | 2.2% to 22% | 249,700 to 2,497,000 |

Table B-1 (Continued)

CUSTOMERS LIKELY TO BUY V-TECS CATALOGS--BY USER CATEGORY

| USER CATEGORY | NUMBER IN U.S.A. | PERCENT LIKELY TO BUY V-TECS CATALOG | NUMBER LIKELY TO BUY V-TECS CATALOG |
|---|---|---|---|
| 4. Students Enrolled In Vocational-Technical Courses (High School, Area Vocational Centers, Community Colleges) | 19,563,000 | 2% to 10% | 391,000 to 1,956,000 |
| 5. Vocational Education | | | |
| 5.1 Secondary | 183,507 | 10% to 20% | 18,350 to 36,700 |
| 5.2 Post Secondary | 80,443 | 10% to 20% | 8,044 to 16,088 |
| 5.3 Adult | 124,586 | 10% to 20% | 12,459 to 24,918 |

N.A. = No estimate available

Sources:

1. For lines 1.1 through 1.7 and lines 2.1, 4, 5.1, 5.2 and 5.3, the source is: National Center for Educational Statistics. The condition of Vocational Education, Review Edition. Washington, Sept. 17, 1980.

2. For lines 2.2, 3.1, 3.2 and 3.3 the source is: U.S. Bureau of the Census. Statistical Abstract of the United States: 1980 (101st Edition.) Washington, D.C. 1980, pp. 176,200,556.

product content. Information is needed with regard to the possible impact of such policies on demand.

The marketing study did address the issues of responsiveness of sales to changes in price. This was done by asking samples of Illinois catalog users what they would do if catalog prices were doubled, halved and reduced to zero. The results are summarized in Table B-2. Taken at face value, the results indicate that:

1. A price reduction would not significantly increase purchases.
2. All user groups would reduce purchases if the price were doubled, but the differences among types of respondents are striking:
    a. High school vocational directors would reduce purchases by less than fifty percent if catalog prices were doubled. Therefore, total revenue to V-TECS would increase with higher prices (examples of this phenomenon are given in Appendix C).
    b. Community college vocational directors and area vocational school directors would reduce purchases by more than fifty percent if prices were doubled. Therefore, total revenue to V-TECS would decrease if prices were doubled.

Discussions with a variety of high school and community college administrators leads the V-TECS marketing study team to believe that the response of the high school vocational directors represents the best estimate regarding how all school based groups would react. Given the relatively modest cost of the catalog, we believe that a doubling of price would lead to less than fifty percent reduction in purchases by community colleges and area vocational schools. In fact, the study team suspects that even the high school administrators' response overstates the degree to which purchases would be reduced if prices were to double.

Table B-2

## PRICE SENSITIVITY OF PURCHASES OF V-TECS CATALOGS AMONG ILLINOIS EDUCATORS, 1980-81

| Price | Number who would purchase a catalog at different prices | | |
|---|---|---|---|
| | High School Voc. Director Number | Community Col. Voc. Director Number | Vocational School Director Number |
| Double Present Price | 15 | 9 | 4 |
| Present Price[a] | 27 | 27 | 19 |
| One Half Present Price | 27 | 29 | 19 |
| Free | 27 | 31 | 22 |

a. Represents a price range of $3 to $13.

The marketing study team did not survey potential buyers with regard to the effects on catalog purchases of other types of marketing effort. To do so would have been largely meaningless. Only actual market testing can elicit information that has any claim to being accurate. However, the marketing study team did develop a number of specific suggestions with regard to what types of marketing efforts might be tried. These are described in Chapter Three above.

## G. Conclusion

The preceding discussion of the demand for catalogs makes it clear that any forecast of potential catalog sales must be based in large measure upon subjective judgments on the part of the forecaster. The concrete data that are available from surveys of past users provide a useful starting place. But the data leave much room for interpretation and, as a consequence, the forecast must include a number of subjective assumptions.

The analyses of Chapter Two use the available data and make the required subjective assumptions. These are clearly indicated in the descriptions of the analyses. Table B-1 presents the numbers used in Chapter Two. In most cases several alternative sets of assumptions are used and the results calculated. Consequently, the analyses in that chapter provide a range of forecasts rather than a "best guess." Readers interested in making their own forecasts, with other sets of assumptions, should find the data in this section quite helpful.

## II. THE DEMAND FOR MEMBERSHIP IN THE V-TECS CONSORTIUM

As was the case with the discussion of the demand for V-TECS catalogs, the discussion of the demand for consortium membership will be organized around the following questions:

1. What are the benefits of V-TECS membership?
2. What groups might find V-TECS membership useful?
3. What percentage of each group is likely to seek V-TECS membership?
4. How many potential V-TECS members are there in each group?
5. What variables can be changed to affect demand for V-TECS membership?

### A. What Are The Benefits Of V-TECS Membership?

There appear to be at least six benefits of membership in the V-TECS consortium. These benefits are:

1. Lowering the cost of producing catalogs
2. Increasing the rate of production of new catalogs
3. Standardizing the quality of catalogs at a high level
4. Performing a civic service
5. Prestige
6. Professional learning

The first three benefits comprise the reasons given by V-TECS' founders for starting the consortium. Without a consortium, a few states would probably produce a few catalogs. But, the quality would not be standardized, there would be a danger of duplication, and the total number of catalogs produced would fall far short of the number needed by educators within the state. By joining together in an agreement to meet specified production quotas; adhering to stipulated production methods; and jointly deciding what catalogs to produce, V-TECS members get higher quality catalogs. They also spend less money on the development process than they would if they attempted to meet all of their needs through their own state effort. Hence, V-TECS membership is the low cost approach to obtaining the material found in the V-TECS catalogs.

The fourth benefit is the opportunity to perform a civic service. The states that are members of V-TECS are performing a valuable public service. Through their membership they are making it possible for vocational educators to have access to the basic data contained in the catalogs and needed for curriculum development. States that are not members are getting a "free ride." Educators in nonmember states can illegally obtain copies of all V-TECS catalogs for a tiny fraction of the cost of membership. Educators in nonmember states can legally obtain copies of a few catalogs at less than membership costs. But those who do so are shirking their civic duty. If all states took their attitude, there would be no catalogs available. Hence, the handful of states that are members can take pride in the fact that through their actions they have made possible the existence of the catalogs. The knowledge that one is doing one's duty or serving one's community can be a powerful motivator. Thus, civic service may be a benefit that V-TECS membership can offer.

The fifth benefit is prestige. In this case, a potential member would be motivated to join V-TECS in order to be associated with a highly regarded organization. V-TECS membership would be sought as a means of impressing legislators, superiors, or or peers. In the early years of V-TECS' history, this factor undoubtedly carried minimal weight. However, the success of V-TECS puts the consortium in a position to make greater use of this motive for membership.

The sixth benefit is professional learning. The participants in V-TECS have a common interest in performance based vocational education. Through their V-TECS activities they have an opportunity to learn from one another and learn together. The technical coordinators and project directors might learn a great deal regarding catalog development methods and practices. The board members might learn not only about the technical aspects of catalog development but also about dissemination. This sixth benefit has not been stressed in the past, but it is an inherent part of V-TECS membership and might be made the means whereby new classes of members are brought into the organization.

The last three benefits discussed above might be lumped together under a heading called "leadership." It can be argued that a desire to provide civic service, a desire to be associated with a prestigious organization in one's field, and a desire for professional learning experiences are all aspects of a desire to be a leader. It is important to get this concept into the discussion at this point because several V-TECS board members have expressed a desire to see V-TECS recognized as a leader in the field of vocational education.

## B. What Groups Might Find Membership In V-TECS Useful?

From the standpoint of the benefits of cost reduction, quality improvement and increased rates of production, V-TECS membership would appeal primarily to state offices responsible for vocational education. Some federal agencies involved with vocational training might also be interested because of these three benefits. Local school districts and vocational educators would undoubtedly applaud V-TECS' efforts, and perhaps some of them could be motivated to purchase some sort of special membership in order to make a small contribution to the work being done by V-TECS. But, there is no indication that the response to such an appeal would be significant.

From the standpoint of the three leadership motives, the appeal of V-TECS membership might reach a much larger number of groups. The marketing study team considers it possible, assuming that several different classes of membership were available, that each of the following groups could be attracted by a leadership appeal:

1. State vocational education agencies
2. Comprehensive high schools with vocational programs
3. Secondary level area vocational centers
4. Community colleges
5. Colleges and universities with vocational education teacher training programs
6. Correctional agencies with vocational education programs
7. Personnel departments of business firms and government agencies
8. Vocational education teachers

In most of the above cases, one or more low cost membership categories would have to be created. In addition, V-TECS would have to create new vehicles to appeal to these members. Such vehicles might include a newsletter, an annual convention at which knowledge in the area of performance based vocational education is shared, and discounts on purchases of catalogs.

C. What Percentage of Each Group Is Likely to Seek Membership?

In terms of states seeking membership, the V-TECS marketing study came up with three quite different answers. The first answer involved looking at the number of states that could justify the high cost of membership on the grounds that the cost per local school unit would be modest. As indicated in Chapter Two, there are 10 nonmember states which qualify. Adding these to the existing 16 members gives a total of 26 states that might be expected to seek or retain membership if V-TECS launches a personal selling effort to bring in the nonmembers and keep existing members.

The second estimate regarding state memberships approached the problem from the standpoint of a state's commitment to performance based vocational education. All 16 of the current V-TECS members believe so strongly in performance based education that they are willing to pay the current membership fees. The marketing study team surveyed the remaining nonmember states and found 31 that regarded performance based vocational education as an important philosophy that they would like to see emphasized in their states. It seems likely that, if the price were right, many or most of these states could be induced to join V-TECS for reasons of prestige or professional learning, in addition to gaining access to catalogs at favorable rates. Adding the 31 nonmembers to the 16 member states gives a total of 47 states that might be considered potential members of V-TECS, if the price were right.

The third estimate regarding state memberships employed the 80:20 rule. The rule is widely used in management consulting. It states that 20 percent of the members of a given population will account for 80 percent of the participation in an activity. Translated to the issue of V-TECS membership, the rule could be interpreted as saying that 20 percent of the population of potential members will be loyal, long term, contributing members of V-TECS while some unspecified but small portion of the remaining 80 percent will be short term members. If this were to be the case, then we would expect that V-TECS would have a core group of 10 loyal and long term state members, with an additional handful of states that would join for a while and then drop out or seek special dispensation from fulfilling their membership obligations. The current level of 16 member states appears to be consistent with the 80:20 rule.

In summary, it is possible to find an argument justifying several widely divergent estimates of the number of states likely to seek membership in V-TECS. The marketing study team did not attach a great deal of confidence to any of the estimates.

In the cases of the other potential membership groups, the 80:20 rule probably provides the best starting point for an estimation of potential members. Assuming that new, low cost membership categories can be created for such groups as school districts, teachers and businesses, members of these groups that choose to join will be those who are motivated by the "leadership" motives discussed above. The 80:20 rule is particularly applicable to this type of situation.

## D. How Many Potential Members Are There In Each Group?

The number of potential members in each group is identical with the number of potential buyers of catalogs in that group.

## E. What Variables Can Be Changed To Affect Demand For Each Group?

There are four variables which can be manipulated to influence demand. The first is the "price" of membership. Price refers both to the cash fee required and to such additional costs as the production of catalogs. A reduction in price should cause an increase in state membership. A drastic reduction in price would be necessary to attract members from the other groups (schools, businesses, teachers).

The second variable is the array of membership categories. In order to attract new membership groups, it will be necessary to establish new membership categories which cost much less than the current fee for state members. Whereas state members currently incur an annual cost of approximately $ 80,000 to be members of V-TECS, it would be necessary to reduce fees for school and business members to $ 1,000 or less. This can be done by creating new membership categories which cost less than state memberships, but also provide fewer benefits than those accruing to state members.

The third variable is the set of benefits which members receive. If new, low cost memberships are created for groups such as schools, businesses and teachers, then tangible benefits will have to be created. As noted above, newsletters and conventions are two logical possibilities. Even in the case of state members, the attraction of being a member might be enhanced by adding benefits not currently available. Here, too, a newsletter might be appropriate.

The fourth variable is the marketing effort. Once the membership categories have been established, along with the prices and benefits, the number of members joining V-TECS in any category will depend upon the effectiveness of the marketing effort.

## III. CONCLUSION

The concepts and data presented in this appendix are useful in addressing the issue of the demand for V-TECS products and services. The analyses in Chapter Two use some of the data and some of the concepts. Others are not used in the present study but have been presented in this appendix in order to give the reader an opportunity to make his/her own estimates of potential demand. It should be clear that there does not yet exist a body of hard data regarding demand. This is a common occurrence in marketing situations.

# APPENDIX C

## Potential Sales Estimates of V-TECS Catalogs in Nonmember and Member States

# POTENTIAL SALES ESTIMATES OF V-TECS CATALOGS IN NONMEMBER AND MEMBER STATES

This appendix[1] presents a variety of catalog sales scenarios. The scenarios differ in terms of assumptions with regard to sales price, percentage of a customer group ordering catalogs and average number of catalogs per order. This appendix was prepared prior to the completion of the user surveys. Consequently, the percentages used in the scenarios differ slightly from those found in Chapter Two. However, the difference is minimal.

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[1] This appendix was prepared by Judith Ann McMurdie.

## I-1 HIGH SCHOOL SCENARIOS - SALES TO NONMEMBER STATES (PUBLIC SCHOOLS ONLY)

In this example, only the 10,015 public comprehensive or vocational high schools in nonmember states are considered to be customers.

The high, medium, and low estimates are derived by varying either the percentage buying or the number of catalogs bought per customer or both.

The percentages used and the possible number of catalogs bought per customer are taken from the results of a survey done by Illinois. In a sample of public high schools, 11.6% have purchased V-TECS catalogs and 20.6% said they either had or would purchase them. These percentages were used for the $10 per catalog estimates. The survey indicated that 53% of the schools would still buy the catalogs if the price was doubled to $20. Therefore, 53% of the above percentages was used for the $20 and $40 estimates.

## I-1 HIGH SCHOOL SCENARIOS - SALES TO NONMEMBER STATES
(Public High Schools Only)

### A. First Year's Order

1. $10 per catalog
   - a. HIGH (20.6% order 16)
     .206 (10,015) ($10) (16) = $330,094.00
   - b. MEDIUM (11.6% order 16)
     .116 (10,015) ($10) (16) = $185,878.00
   - c. LOW (11.6% order 5)
     .116 (10,015) ($10) (5) = $ 58,087.00

2. $20 per catalog
   - a. HIGH (.53) (.206) = 10.9% order 16
     .109 (10,015) ($20) (16) = $349,323.00
   - b. MEDIUM (.53) (.116) = 6.1% order 16
     .061 (10,015) ($20) (16) = $195,493.00
   - c. LOW (.53) (.116) = 6.1% order 5
     .061 (10,015) ($20) (5) = $ 61,091.00

3. $49 per catalog
   - a. HIGH (.53) (.206) = 10.9% order 16
     .109 (10,015) ($49) (16) = $855,842.00
   - b. MEDIUM (.53) (.116) = 6.1% order 16
     .061 (10,015) ($49) (16) = $478,957.00
   - c. LOW (.53) (.116) = 6.1% order 5
     .061 (10,015) ($49) (5) = $149,674.00

### B. Annual Sales From Second Year On (Assumes 20 new titles/year)

1. $10 per catalog
   - a. HIGH (20.6% order 5/year)
     .206 (10,015) ($10) (5) = $103,154.00
   - b. MEDIUM (11.6% order 5/year)
     .116 (10,015) ($10) (5) = $ 58,087.00
   - c. LOW (11.6% order 2/year)
     .116 (10,015) ($10) (2) = $ 23,235.00

2. $20 per catalog
   - a. HIGH (.53) (.206) = 10.9% order 5/year
     .109 (10,015) ($20) (5) = $109,163.00
   - b. MEDIUM (.53) (.116) = 6.1% order 5/year
     .061 (10,015) ($20) (5) = $ 61,091.00
   - c. LOW (.53) (.116) = 6.1% order 2/year
     .061 (10,015) ($20) (2) = $ 24,437.00

3. $49 per catalog
   - a. HIGH (.53) (.206) = 10.9% order 5/year
     .109 (10,015) ($49) (5) = $267,451.00
   - b. MEDIUM (.53) (.116) = 6.1% order 5/year
     .061 (10,015) ($49) (5) = $149,674.00
   - c. LOW (.53) (.116) = 6.1% order 2/year
     .061 (10,015) ($49) (2) = $ 59,870.00

## I-2 HIGH SCHOOL SCENARIOS - SALES TO MEMBER STATES (PUBLIC SCHOOLS ONLY)

In this example, only the 5,714 public comprehensive or vocational high schools in member states are considered to be customers.

The high, medium, and low estimates are derived by varying either the percentage buying or the number of catalogs bought per customer or both.

The percentages used and the possible number of catalogs bought per customer are taken from the results of a survey done by Illinois. In a sample of public high schools, 11.6% have purchased V-TECS catalogs and 20.6% said they either had or would purchase them. These percentages were used for the $10 per catalog estimates. The survey indicated that 53% of the schools would still buy the catalogs if the price was doubled to $20. Therefore, 53% of the above percentages was used for the $20 and $49 estimates.

## I-2 HIGH SCHOOL SCENARIOS - SALES TO MEMBER STATES
(Public High Schools Only)

### A. First Year's Order

1. $10 per catalog
   - a. HIGH (20.6% order 16)
     .206 (5,714) ($10) (16) = $188,333.00
   - b. MEDIUM (11.6% order 16)
     .116 (5,714) ($10) (16) = $106,052.00
   - c. LOW (11.6% order 5)
     .116 (5,714) ($10) (5) = $ 33,141.00

2. $20 per catalog
   - a. HIGH (.53) (.206) = 10.9% order 16
     .109 (5,714) ($20) (16) = $199,304.00
   - b. MEDIUM (.53) (.116) = 6.1% order 16
     .061 (5,714) ($20) (16) = $111,537.00
   - c. LOW (.53) (.116) = 6.1% order 5
     .061 (5,714) ($20) (5) = $ 34,855.00

3. $49 per catalog
   - a. HIGH (.53) (.206) = 10.9% order 16
     .109 (5,714) ($49) (16) = $488,296.00
   - b. MEDIUM (.53) (.116) = 6.1% order 16
     .061 (5,714) ($49) (16) = $273,266.00
   - c. LOW (.53) (.116) = 6.1% order 5
     .061 (5,714) ($49) (5) = $ 85,396.00

### B. Annual Sales From Second Year On (Assumes 20 new titles/year)

1. $10 per catalog
   - a. HIGH (20.6% order 5/year)
     .206 (5,714) ($10) (5) = $ 58,854.00
   - b. MEDIUM (11.6% order 5/year)
     .116 (5,714) ($10) (5) = $ 33,141.00
   - c. LOW (11.6% order 2/year)
     .116 (5,714) ($10) (2) = $ 13,256.00

2. $20 per catalog
   - a. HIGH (.53) (.206) = 10.9% order 5/year
     .109 (5,714) ($20) (5) = $ 62,283.00
   - b. MEDIUM (.53) (.116) = 6.1% order 5/year
     .061 (5,714) ($20) (5) = $ 34,855.00
   - c. LOW (.53) (.116) = 6.1% order 2/year
     .061 (5,714) ($20) (2) = $ 13,942.00

3. $49 per catalog
   - a. HIGH (.53) (.206) = 10.9% order 5/year
     .109 (5,714) ($49) (5) = $152,592.00
   - b. MEDIUM (.53) (.116) = 6.1% order 5/year
     .061 (5,714) ($49) (5) = $ 85,396.00
   - c. LOW (.53) (.116) = 6.1% order 2/year
     .061 (5,714) ($49) (2) = $ 34,158.00

## I-3 HIGH SCHOOL SCENARIOS - SALES TO NONMEMBER AND MEMBER STATES (PUBLIC SCHOOLS ONLY)

In this example, only the 15,729 public comprehensive or vocational high schools in nonmember and member states are considered to be customers.

The high, medium, and low estimates are derived by varying either the percentage buying or the number of catalogs bought per customer or both.

The percentages used and the possible number of catalogs bought per customer are taken from the results of a survey done by Illinois. In a sample of public high schools, 11.6% have purchased V-TECS catalogs and 20.6% said they either had or would purchase them. These percentages were used for the $10 per catalog estimates. The survey indicated that 53% of the schools would still buy the catalogs if the price was doubled to $20. Therefore, 53% of the above percentages was used for the $20 and $49 estimates.

## I-3 HIGH SCHOOL SCENARIOS - SALES TO NONMEMBER AND MEMBER STATES
(Public High Schools Only)

### A. First Year's Order

1. $10 per catalog
   - a. HIGH (20.6% order 16)
     .206 (15,729) ($10) (16) = $518,427.00
   - b. MEDIUM (11.6% order 16)
     .116 (15,729) ($10) (16) = $291,930.00
   - c. LOW (11.6% order 5)
     .116 (15,729) ($10) (5) = $ 91,228.00

2. $20 per catalog
   - a. HIGH (.53) (.206) = 10.9% order 16
     .109 (15,729) ($20) (16) = $548,627.00
   - b. MEDIUM (.53) (.116) = 6.1% order 16
     .061 (15,729) ($20) (16) = $307,030.00
   - c. LOW (.53) (.116) = 6.1% order 5
     .061 (15,729) ($20) (5) = $ 95,946.00

3. $49 per catalog
   - a. HIGH (.53) (.206) = 10.9% order 16
     .109 (15,729) ($49) (16) = $1,344,138.00
   - b. MEDIUM (.53) (.116) = 6.1% order 16
     .061 (15,729) ($49) (16) = $752,223.00
   - c. LOW (.53) (.116) = 6.1% order 5
     .061 (15,729) ($49) (5) = $235,070.00

### B. Annual Sales From Second Year On (Assumes 20 new titles/year)

1. $10 per catalog
   - a. HIGH (20.6% order 5/year)
     .206 (15,729) ($10) (5) = $162,008.00
   - b. MEDIUM (11.6% order 5/year)
     .116 (15,729) ($10) (5) = $ 91,228.00
   - c. LOW (11.6% order 2/year)
     .116 (15,729) ($10) (2) = $ 36,491.00

2. $20 per catalog
   - a. HIGH (.53) (.206) = 10.9% order 5/year
     .109 (15,729) ($20) (5) = $171,446.00
   - b. MEDIUM (.53) (.116) = 6.1% order 5/year
     .061 (15,729) ($20) (5) = $ 95,946.00
   - c. LOW (.53) (.116) = 6.1% order 2/year
     .061 (15,729) ($20) (2) = $ 38,379.00

3. $49 per catalog
   - a. HIGH (.53) (.206) = 10.9% order 5/year
     .109 (15,729) ($49) (5) = $420,043.00
   - b. MEDIUM (.53) (.116) = 6.1% order 5/year
     .061 (15,729) ($49) (5) = $235,070.00
   - c. LOW (.53) (.116) = 6.1% order 2/year
     .061 (15,729) ($49) (2) = $ 94,028.00

## II-1 COMMUNITY COLLEGE SCENARIOS - SALES TO NONMEMBER STATES

In this example, only the 670 two-year institutions of higher education in nonmember states are considered to be customers.

The high, medium high, medium low, and low estimates are derived by varying either the percentage buying or the number of catalogs bought per customer or both.

## II-1 COMMUNITY COLLEGE SCENARIOS - SALES TO NONMEMBER STATES

### A. First Year's Order

1. $10 per catalog
   - a. HIGH (27% order 22)
     .27 (670) ($10) (22) = $ 39,798.00
   - b. MEDIUM HIGH (22% order 16)
     .22 (670) ($10) (16) = $ 23,584.00
   - c. MEDIUM LOW (22% order 9)
     .22 (670) ($10) (9) = $ 13,266.00
   - d. LOW (10.2% order 5)
     .102 (670) ($10) (5) = $ 3,417.00
2. $20 per catalog
   - a. HIGH (.55) (.27) = 14.8% order 22
     .148 (670) ($20) (22) = $ 43,630.00
   - b. MEDIUM HIGH (.55) (.22) = 12.1% order 16
     .121 (670) ($20) (16) = $ 25,942.00
   - c. MEDIUM LOW (.55) (.22) = 12.1% order 9
     .121 (670) ($20) (9) = $ 14,593.00
   - d. LOW (.55) (.102) = 5.6% order 5
     .056 (670) ($20) (5) = $ 3,752.00
3. $49 per catalog
   - a. HIGH (.55) (.27) = 14.8% order 22
     .148 (670) ($49) (22) = $106,894.00
   - b. MEDIUM HIGH (.55) (.22) = 12.1% order 16
     .121 (670) ($49) (16) = $ 63,559.00
   - c. MEDIUM LOW (.55) (.22) = 12.1% order 9
     .121 (670) ($49) (9) = $ 35,752.00
   - d. LOW (.55) (.102) = 5.6% order 5
     .056 (670) ($49) (5) = $ 9,192.00

### B. Annual Sales From Second Year On (Assumes 20 new titles/year)

1. $10 per catalog
   - a. HIGH (27% order 6/year)
     .27 (670) ($10) (6) = $ 10,854.00
   - b. MEDIUM HIGH (22% order 6/year)
     .22 (670) ($10) (6) = $ 8,844.00
   - c. MEDIUM LOW (22% order 2/year)
     .22 (670) ($10) (2) = $ 2,948.00
   - d. LOW (10,2% order 2/year)
     .102 (670) ($10) (2) = $ 1,367.00
2. $20 per catalog
   - a. HIGH (.55) (.27) = 14.8% order 6/year
     .148 (670) ($20) (6) = $ 11,899.00
   - b. MEDIUM HIGH (.55) (.22) = 12.1% order 6/year
     .121 (670) ($20) (6) = $ 9,728.00

## II-1 COMMUNITY COLLEGE SCENARIOS - SALES TO NONMEMBER STATES (cont.)

c. MEDIUM LOW (.55) (.22) = 12.1% order 2/year
.121 (670) ($20) (2) = $ 3,243.00
d. LOW (.55) (.102) = 5.6% order 2/year
.056 (670) ($20) (2) = $ 1,501.00

3. $49 per catalog
a. HIGH (.55) (.27) = 14.8% order 6/year
.148 (670) ($49) (6) = $ 29,153.00
b. MEDIUM HIGH (.55) (.22) = 12.1% order 6/year
.121 (670) ($49) (6) = $ 23,835.00
c. MEDIUM LOW (.55) (.22) = 12.1% order 2/year
.121 (670) ($49) (2) = $ 7,945.00
d. LOW (.55) (.102) = 5.6% order 2/year
.056 (670) ($49) (2) = $ 3,677.00

## II-2 COMMUNITY COLLEGE SCENARIOS - SALES TO MEMBER STATES

In this example, only the 464 two-year institutions of higher education in member states are considered to be customers.

The high, medium high, medium low, and low estimates are derived by varying either the percentage buying or the number of catalogs bought per customer or both.

## II-2 COMMUNITY COLLEGE SCENARIOS - SALES TO MEMBER STATES

### A. First Year's Order

1. $10 per catalog
    a. HIGH (27% order 22)
        .27 (464) ($10) (22) = $ 27,562.00
    b. MEDIUM HIGH (22% order 16)
        .22 (464) ($10) (16) = $ 16,333.00
    c. MEDIUM LOW (22% order 9)
        .22 (464) ($10) (9) = $ 9,187.00
    d. LOW (10.2% order 5)
        .102 (464) ($10) (5) = $ 2,366.00

2. $20 per catalog
    a. HIGH (.55) (.27) = 14.8% order 22
        .148 (464) ($20) (22) = $ 30,216.00
    b. MEDIUM HIGH (.55) (.22) = 12.1% order 16
        .121 (464) ($20) (16) = $ 17,966.00
    c. MEDIUM LOW (.55) (.22) = 12.1% order 9
        .121 (464) ($20) (9) = $ 10,106.00
    d. LOW (.55) (.102) = 5.6% order 5
        .056 (464) ($20) (5) = $ 2,598.00

3. $49 per catalog
    a. HIGH (.55) (.27) = 14.8% order 22
        .148 (464) ($49) (22) = $ 74,028.00
    b. MEDIUM HIGH (.55) (.22) = 12.1% order 16
        .121 (464) ($49) (16) = $ 44,017.00
    c. MEDIUM LOW (.55) (.22) = 12.1% order 9
        .121 (464) ($49) (9) = $ 24,760.00
    d. LOW (.55) (.102) = 5.6% order 5
        .056 (464) ($49) (5) = $ 6,366.00

### B. Annual Sales From Second Year On (Assumes 20 new titles/year)

1. $10 per catalog
    a. HIGH (27% order 6/year)
        .27 (464) ($10) (6) = $ 7,517.00
    b. MEDIUM HIGH (22% order 6/year)
        .22 (464) ($10) (6) = $ 6,125.00
    c. MEDIUM LOW (22% order 2/year)
        .22 (464) ($10) (2) = $ 2,042.00
    d. LOW (10.2% order 2/year)
        .102 (464) ($10) (2) = $ 947.00

2. $20 per catalog
    a. HIGH (.55) (.27) = 14.8% order 6/year
        .148 (464) ($20) (6) = $ 8,241.00
    b. MEDIUM HIGH (.55) (.22) = 12.1% order 6/year
        .121 (464) ($20) (6) = $ 6,737.00

## II-2 COMMUNITY COLLEGE SCENARIOS - SALES TO MEMBER STATES (cont.)

c. MEDIUM LOW (.55) (.22) = 12.1% order 2/year
.121 (464) ($20) (2) = $ 2,246.00
d. LOW (.55) (.102) = 5.6% order 2/year
.056 (464) ($20) (2) = $ 1,039.00

3. $49 per catalog
a. HIGH (.55) (.27) = 14.8% order 6/year
.148 (464) ($49) (6) = $ 20,190.00
b. MEDIUM HIGH (.55) (.22) = 12.1% order 6/year
.121 (464) ($49) (6) = $ 16,506.00
c. MEDIUM LOW (.55) (.22) = 12.1% order 2/year
.121 (464) ($49) (2) = $ 5,502.00
d. LOW (.55) (.102) = 5.6% order 2/year
.056 (464) ($49) (2) = $ 2,546.00

## II-3 COMMUNITY COLLEGE SCENARIOS - SALES TO NONMEMBER AND MEMBER STATES

In this example, only the 1,134 two-year institutions of higher education in nonmember and member states are considered to be customers.

The high, medium high, medium low, and low estimates are derived by varying either the percentage buying or the number of catalogs bought per customer or both.

## II-3 COMMUNITY COLLEGE SCENARIOS - SALES TO NONMEMBER AND MEMBER STATES

### A. First Year's Order

1. $10 per catalog
   - a. HIGH (27% order 22)
     .27 (1,134) ($10) (22) = $ 67,360.00
   - b. MEDIUM HIGH (22% order 16)
     .22 ( 1,134) ($10) (16) = $ 39,917.00
   - c. MEDIUM LOW (22% order 9)
     .22 (1,134) ($10) (9) = $ 22,453.00
   - d. LOW (10.2% order 5)
     .102 (1,134) ($10) (5) = $ 5,783.00

2. $20 per catalog
   - a. HIGH (.55) (.27) = 14.8% order 22
     .148 (1,134) ($20) (22) = $ 73,846.00
   - b. MEDIUM HIGH (.55) (.22) = 12.1% order 16
     .121 (1,134) ($20) (16) = $ 43,908.00
   - c. MEDIUM LOW (.55) (.22) = 12.1% order 9
     .121 (1,134) ($20) (9) = $ 24,699.00
   - d. LOW (.55) (.102) = 5.6% order 5
     .056 (1,134) ($20) (5) = $ 6,350.00

3. $49 per catalog
   - a. HIGH (.55) (.27) = 14.8% order 22
     .148 (1,134) ($49) ( 22) = $180,922.00
   - b. MEDIUM HIGH (.55) (.22) = 12.1% order 16
     .121 (1,134) ($49) (16) = $107,576.00
   - c. MEDIUM LOW (.55) (.22) = 12.1% order 9
     .121 (1,134) ($49) (9) = $ 60,512.00
   - d. LOW (.55) (.102) = 5.6% order 5
     .056 (1,134) ($49) (5) = $ 15,558.00

### B. Annual Sales From Second Year On (Assumes 20 new titles/year)

1. $10 per catalog
   - a. HIGH (27% order 6/year)
     .27 (1,134) ($10) (6) = $ 18,371.00
   - b. MEDIUM HIGH (22% order 6/year)
     .22 (1,134) ($10) (6) = $ 14,969.00
   - c. MEDIUM LOW (22% order 2/year)
     .22 (1,134) ($10) (2) = $ 4,990.00
   - d. LOW (10.2% order 2/year)
     .102 (1,134) ($10) (2) = $ 2,314.00

2. $20 per catalog
   - a. HIGH (.55) (.27) = 14.8% order 6/year
     .148 (1,134) ($20) (6) = $ 20,140.00
   - b. MEDIUM HIGH (.55) (.22) = 12.1% order 6/year
     .121 (1,134) ($20) (6) = $ 16,465.00

II-3 COMMUNITY COLLEGE SCENARIOS - SALES TO NONMEMBER AND MEMBER STATES (cont.)

c. MEDIUM LOW (.55) (.22) = 12.1% order 2/year
.121 (1,134) ($20) (2) = $ 5,489.00
d. LOW (.55) (.102) = 5.6% order 2/year
.056 (1,134) ($20) (2) = $ 2,540.00

3. $49 per catalog
a. HIGH (.55) (.27) = 14.8% order 6/year
.148 (1,134) ($49) (6) = $ 49,343.00
b. MEDIUM HIGH (.55) (.22) = 12.1% order 6/year
.121 (1,134) ($49) (6) = $ 40,341.00
c. MEDIUM LOW (.55) (.22) = 12.1% order 2/year
.121 (1,134) ($49) (2) = $ 13,447.00
d. LOW (.55) (.102) = 5.6% order 2/year
.056 (1,134) ($49) (2) = $ 6,223.00

## III. NONCOLLEGIATE POSTSECONDARY SCHOOL SCENARIOS - SALES TO NONMEMBER AND MEMBER STATES

In this example, only the 7,625 public and private noncollegiate postsecondary institutions in nonmember and member states are considered to be customers.

The estimates were done for each category of noncollegiate postsecondary schools. These categories and the number of each type of school in both nonmember and member states is as follows:

| | |
|---|---|
| Vocational/Technical | 606 |
| Technical/Institute | 99 |
| Business/Office | 1,249 |
| Cosmetology/Barber | 2,163 |
| Flight | 1,064 |
| Trade | 716 |
| Arts/Design | 246 |
| Hospital | 917 |
| Allied Health | 356 |
| Other | 210 |

For the First Year's Order figures, the number of catalogs ordered for the high estimate is the total number of V-TECS catalogs pertaining to that category and the low estimates use one-fifth of the total number of applicable catalogs in most cases. For the Vocational/Technical and Technical/Institute categories the high estimate uses the 85 V-TECS catalogs now available minus those pertaining to agriculture (85-12=73), the medium estimate uses those 73 catalogs minus those for Arts/Design, Hospital, and Allied Health (73-10=63) and the low estimate takes one-fifth of 73. There are no V-TECS catalogs which apply to Flight schools so no figures have been done for that category.

For the Annual Sales From Second Year On, the V-TECS catalogs were divided into approximately 20 per year and an average of catalogs per year for each category was then figured. This number was used in the estimates for this section. The Vocational/Technical and Technical/Institute categories use 20 catalogs per year for the high and medium estimates and 17 (one-fifth of the total of 73 catalogs) for the low estimates. The following table presents the number of catalogs per year in the other categories and the average of those figures. Note that the Cosmetology and the Arts/Design schools have only one catalog in four years (both of which came out the first year) and the Allied Health schools had only one the first year, two the second, and none the last two years. The "Other" category includes catalogs pertaining to Homemaker, Child Care Worker, Hotel/Motel Desk Clerk, and Public Housing Management.

## III. NONCOLLEGIATE POSTSECONDARY SCHOOL SCENARIOS - SALES TO NONMEMBER AND MEMBER STATES (cont.)

| Type of School | First Yr. | Second Yr. | Third Yr. | Fourth Yr. | Average |
|---|---|---|---|---|---|
| Business/Office | 8 | 1 | 2 | 5 | 4.00 |
| Cosmetology/Barber | 1 | 0 | 0 | 0 | .25 |
| Trade | 5 | 10 | 13 | 10 | 9.50 |
| Arts/Design | 1 | 0 | 0 | 0 | .25 |
| Hospital | 0 | 4 | 1 | 1 | 1.50 |
| Allied Health | 1 | 2 | 0 | 0 | .75 |
| Other | 1 | 1 | 1 | 5 | 2.00 |

## III. NONCOLLEGIATE POSTSECONDARY SCHOOL SCENARIOS - SALES TO NONMEMBER AND MEMBER STATES

### 1. VOCATIONAL/TECHNICAL SCHOOLS

#### A. First Year's Order

1. $10 per catalog
   - a. HIGH (27% order 73)
     .27 (606) ($10) (73) = $119,443.00
   - b. MEDIUM (22% order 63)
     .22 (606) ($10) (63) = $ 83,992.00
   - c. LOW (10.2% order one-fifth of 73 = 17)
     .102 (606) ($10) (17) = $ 10,508.00
2. $20 per catalog
   - a. HIGH (.55) (.27) = 14.8% order 73
     .148 (606) ($20) (73) = $130,944.00
   - b. MEDIUM (.55) (.22) = 12.1% order 63
     .121 (606) ($20) (63) = $ 92,391.00
   - c. LOW (.55) (.102) = 5.6% order 17
     .056 (606) ($20) (17) = $ 11,538.00
3. $49 per catalog
   - a. HIGH (.55) (.27) = 14.8% order 73
     .148 (606) ($49) (73) = $320,814.00
   - b. MEDIUM (.55) (.22) = 12.1% order 63
     .121 (606) ($49) (63) = $226,357.00
   - c. LOW (.55) (.102) = 5.6% order 17
     .056 (606) ($49) (17) = $ 28,269.00

#### B. Annual Sales From Second Year On (Assumes 20 new titles/year)

1. $10 per catalog
   - a. HIGH (27% order 20/year)
     .27 (606) ($10) (20) = $ 32,724.00
   - b. MEDIUM (22% order 20/year)
     .22 (606) ($10) (20) = $ 26,664.00
   - c. LOW (10.2% order 17/year)*
     .102 (606) ($10) (17) = $ 10,508.00
2. $20 per catalog
   - a. HIGH (.55) (.27) = 14.8% order 20/year
     .148 (606) ($20) (20) = $ 35,875.00
   - b. MEDIUM (.55) (.22) = 12.1% order 20/year
     .121 (606) ($20) (20) = $ 29,330.00
   - c. LOW (.55) (.102) = 5.6% order 17/year
     .056 (606) ($20) (17) = $ 11,538.00

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*The number 17 is derived from one-fifth of 73, as used in the First Year's Order above---low estimates.

## III. NONCOLLEGIATE POSTSECONDARY SCHOOL SCENARIOS - SALES TO NONMEMBER AND MEMBER STATES

### 1. VOCATIONAL/TECHNICAL SCHOOLS (cont.)

3. $49 per catalog
   a. HIGH (.55) (.27) = 14.8% order 20/year
      .148 (606) ($49) (20) = $ 87,894.00
   b. MEDIUM (.55) (.22) = 12.1% order 20/year
      .121 (606) ($49) (20) = $ 71,859.00
   c. LOW (.55) (.102) = 5.6% order 17/year
      .056 (606) ($49) (17) = $ 28,269.00

## III. NONCOLLEGIATE POSTSECONDARY SCHOOL SCENARIOS - SALES TO NONMEMBER AND MEMBER STATES

### 2. TECHNICAL/INSTITUTE SCHOOLS

### A. First Year's Order

1. $10 per catalog
   - a. HIGH (27% order 73)
     .27 (99) ($10) (73) = $ 19,513.00
   - b. MEDIUM (22% order 63)
     .22 (99) ($10) (63) = $ 13,721.00
   - c. LOW (10.2% order one-fith of 73 = 17)
     .102 (99) ($10) (17) = $ 1,717.00

2. $20 per catalog
   - a. HIGH (.55) (.27) = 14.8% order 73
     .148 (99) ($20) (73) = $ 21,392.00
   - b. MEDIUM (.55) (.22) = 12.1% order 63
     .121 (99) ($20) (63) = $ 15,094.00
   - c. LOW (.55) (.102) = 5.6% order 17
     .056 (99) ($20) (17) = $ 1,885.00

3. $49 per catalog
   - a. HIGH (.55) (.27) = 14.8% order 73
     .148 (99) ($49) (73) = $ 52,410.00
   - b. MEDIUM (.55) (.22) = 12.1% order 63
     .121 (99) ($49) (63) = $ 36,979.00
   - c. LOW (.55) (.102) = 5.6% order 17
     .056 (99) ($49) (17) = $ 4,618.00

### B. Annual Sales From Second Year On (Assumes 20 new titles/year)

1. $10 per catalog
   - a. HIGH (27% order 20/year)
     .27 (99) ($10) (20) = $ 5,346.00
   - b. MEDIUM (22% order 20/year)
     .22 (99) ($10) (20) = $ 4,356.00
   - c. LOW (10.2% order 17/year)*
     .102 (99) ($10) (17) = $ 1,717.00

2. $20 per catalog
   - a. HIGH (.55) (.27) = 14.8% order 20/year
     .148 (99) ($20) (20) = $ 5,861.00
   - b. MEDIUM (.55) (.22) = 12.1% order 20/year
     .121 (99) ($20) (20) = $ 4,792.00
   - c. LOW (.55) (.102) = 5.6% order 17/year
     .056 (99) ($20) (17) = $ 1,885.00

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*The number 17 is derived from one-fifth of 73, as used in the First Year's Order above---low estimates.

## III. NONCOLLEGIATE POSTSECONDARY SCHOOL SCENARIOS - SALES TO NONMEMBER AND MEMBER STATES

### 2. TECHNICAL/INSTITUTE SCHOOLS (cont.)

3. $49 per catalog
    a. HIGH (.55) (.27) = 14.8% order 20/year
    .148 (99) ($49) (20) = $ 14,359.00
    b. MEDIUM (.55) (.22) = 12.1% order 20/year
    .121 (99) ($48) (20) = $ 11,739.00
    c. LOW (.55) (.102) = 5.6% order 17/year
    .056 (99) ($49) (17) = $ 4,618.00

## III. NONCOLLEGIATE POSTSECONDARY SCHOOL SCENARIOS - SALES TO NONMEMBER AND MEMBER STATUS

### 3. BUSINESS/OFFICE SCHOOLS

#### A. First Year's Order

1. $10 per catalog
a. HIGH (27% order 16)
.27 (1,249) ($10) (16) = $ 53,957.00
b. MEDIUM (22% order 14)
.22 (1,249) ($10) (14) = $ 38,469.00
c. LOW (10.2% order one-fifth of 16 = 3.2)
.102 (1,249) ($10)(3.2)= $ 4,077.00
(10.2% order 3)
.102 (1,249) ($10) (3) = $ 3,822.00

2. $20 per catalog
a. HIGH (.55) (.27) = 14.8% order 16
.148 (1,249( ($20) (16)= $ 59,153.00
b. MEDIUM (.55) (.22) = 12.1% order 14
.121 (1,249) ($20) (14)= $ 42,316.00
c. LOW (.55) (.102) = 5.6% order 3.2
.056 (1,249) ($20)(3.2)= $ 4,476.00
(5.6% order 3)
.056 (1,249) ($20) (3) = $ 4,197.00

3. $49 per catalog
a. HIGH (.55) (.27) = 14.8% order 16
.148 (1,249) ($49) (16)= $144,924.00
b. MEDIUM (.55) (.22) = 12.1% order 14
.121 (1,249) ($49) (14)= $103,674.00
c. LOW (.55) (.102) = 5.6% order 3.2
.056 (1,249) ($49)(3.2)= $ 10,967.00
(5.6% order 3)
.056 (1,249) ($49) (3) = $ 10,282.00

#### B. Annual Sales From Second Year On (Assumes 20 new titles/year)

1. $10 per catalog
a. HIGH (27% order 4/year)
.27 (1,249) ($10) (4) = $ 13,489.00
b. MEDIUM (22% order 4/year)
.22 (1,249) ($10) (4) = $ 10,991.00
c. LOW (10.2% order 4/year)
.102 (1,249) ($10) (4) = $ 5,096.00

## III. NONCOLLEGIATE POSTSECONDARY SCHOOL SCENARIOS - SALES TO NONMEMBER AND MEMBER STATES

### 3. BUSINESS/OFFICE SCHOOLS (cont.)

2. $20 per catalog
    a. HIGH (.55) (.27) = 14.8% order 4/year
    .148 (1,249) ($20) (4) = $ 14,788.00
    b. MEDIUM (.55) (.22) = 12.1% order 4/year
    .121 (1,249) ($20) (4) = $ 12,090.00
    c. LOW (.55) (.102) = 5.6% order 4/year
    .056 (1,249) ($20) (4) = $ 5,596.00

3. $49 per catalog
    a. HIGH (.55) (.27) = 14.8% order 4/year
    .148 (1,249) ($49) (4) = $ 36,231.00
    b. MEDIUM (.55) (.22) = 12.1% order 4/year
    .121 (1,249) ($49) (4) = $ 29,621.00
    c. LOW (.55) (.102) = 5.6% order 4/year
    .056 (1,249) ($49) (4) = $ 13,709.00

## III. NONCOLLEGIATE POSTSECONDARY SCHOOL SCENARIOS - SALES TO NONMEMBER AND MEMBER STATES

### 4. COSMETOLOGY/BARBER SCHOOLS

#### A. First Year's Order

1. $10 per catalog
   - a. HIGH (27% order 1)
     .27 (2,163) ($10) (1) = $ 5,840.00
   - b. MEDIUM (22% order 1)
     .22 (2,163) ($10) (1) = $ 4,759.00
   - c. LOW (10.2% order one-fifth of 1 = .2)
     .102 (2,163) ($10) (.2)= $ 441.00
     (10.2% order 1)
     .102 (2,163) ($10) (1) = $ 2,206.00
2. $20 per catalog
   - a. HIGH (.55) (.27) = 14.8% order 1
     .148 (2,163) ($20) (1) = $ 6,402.00
   - b. MEDIUM (.55) (.22) = 12.1% order 1
     .121 (2,163) ($20) (1) = $ 5,234.00
   - c. LOW (.55) (.102) = 5.6% order .2
     .056 (2,163) ($20) (.2)= $ 485.00
     (5.6% order 1)
     .056 (2,163) ($20) (1) = $ 2,423.00
3. $49 per catalog
   - a. HIGH (.55) (.27) = 14.8% order 1
     .148 (2,163) ($49) (1) = $ 15,686.00
   - b. MEDIUM (.55) (.22) = 12.1% order 1
     .121 (2,163) ($49) (1) = $ 12,824.00
   - c. LOW (.55) (.102) = 5.6% order .2
     .056 (2,163) ($49) (.2)= $ 1,187.00
     (5.6% order 1)
     .056 (2,163) ($49) (1) = $ 5,935.00

#### B. Annual Sales From Second Year On (Assumes 20 new titles/year)

1. $10 per catalog
   - a. HIGH (27% order .25/year)
     .27 (2,163) ($10) (.25)= $ 1,460.00
   - b. MEDIUM (22% order .25/year)
     .22 (2,163) ($10) (.25)= $ 1,190.00
   - c. LOW (10.2% order .25/year)
     .102 (2,163) ($10) (.25)= $ 552.00

## III. NONCOLLEGIATE POSTSECONDARY SCHOOL SCENARIOS - SALES TO NONMEMBER AND MEMBER STATES

3. COSMETOLOGY/BARBER SCHOOLS (cont.)

2. $20 per catalog
   a. HIGH (.55) (.27) = 14.8% order .25/year
      .148 (2,163) ($20) (.25)= $ 1,601.00
   b. MEDIUM (.55) (.22) = 12.1% order .25/year
      .121 (2,163) ($20) (.25)= $ 1,309.00
   c LOW (.55) (.102) = 5.6% order .25/year
      .056 (2,163) ($20) (.25)= $ 606.00

3. $49 per catalog
   a. HIGH (.55) (.27) = 14.8% order .25/year
      .148 (2,163) ($49) (.25)= $ 3,922.00
   b. MEDIUM (.55) (.22) = 12.1% order .25/year
      .121 (2,163) ($49) (.25)= $ 3,206.00
   c. LOW (.55) (.102) = 5.6% order .25/year
      .056 (2,163) ($49) (.25)= $ 1,484.00

## III. NONCOLLEGIATE POSTSECONDARY SCHOOL SCENARIOS - SALES TO NONMEMBER AND MEMBER STATES

### 5. TRADE SCHOOLS

### A. First Year's Order

1. $10 per catalog
    - a. HIGH (27% order 38)
      .27 (716) ($10) (38) = $ 73,462.00
    - b. MEDIUM (22% order 34)
      .22 (716) ($10) (34) = $ 53,557.00
    - c. LOW (10.2% order one-fifth of 38 = 7.6)
      .102 (716) ($10) (7.6) = $ 5,550.00
      (10.2% order 8)
      .102 (716) ($10) (7) = $ 5,843.00
2. $20 per catalog
    - a. HIGH (.55) (.27) = 14.8% order 38
      .148 (716) ($20) (38) = $ 80,536.00
    - b. MEDIUM (.55) (.22) = 12.1% order 34
      .121 (716) ($20) (34) = $ 58,912.00
    - c. LOW (.55) (.102) = 5.6% order 7.6
      .056 (716 ) ($20) (7.6)= $ 6,095.00
      (5.6% order 8)
      .056 (716) ($20) (8) = $ 6,415.00
3. $49 per catalog
    - a. HIGH (.55) (.27) = 14.8% order 38
      .148 (716) ($49) (38) = $197,312.00
    - b. MEDIUM (.55) (.22) = 12.1% order 34
      .121 (716) ($49) (34) = $144,336.00
    - c. LOW (.55) (.102) = 5.6% order 7.6
      .056 )716) ($49) (7.6) = $ 14,932.00
      (5.6% order 8)
      .056 (716) ($49) (8) = $ 15,718.00

### B. Annual Sales From Second Year On (Assumes 20 new titles/year)

1. $10 per catalog
    - a. HIGH (27% order 9.5/year)
      .27 (716) ($10) (9.5) = $ 18,365.00
    - b. MEDIUM (22% order 9.5/year)
      .22 (716) ($10) (9.5) = $ 14,964.00
    - c. LOW (10.2% order 9.5/year)
      .102 (716) ($10) (9.5) = $ 6,938.00

## III. NONCOLLEGIATE POSTSECONDARY SCHOOL SCENARIOS - SALES TO NONMEMBER AND MEMBER STATES

5. TRADE SCHOOLS (cont.)

2. $20 per catalog
   a. HIGH (.55) (.27) = 14.8% order 9.5/year
      .148 (716) ($20) (9.5) = $ 20,134.00
   b. MEDIUM (.55) (.22) = 12.1% order 9.5/year
      .121 (716) ($20) (9.5) = $ 16,461.00
   c. LOW (.55) (.102) = 5.6% order 9.5/year
      .056 (716) ($20) (9.5) = $ 7,618.00

3. $49 per catalog
   a. HIGH (.55) (.27) = 14.8% order 9.5/year
      .148 (716) ($49) (9.5) = $ 49,328.00
   b. MEDIUM (.55) (.22) = 12.1% order 9.5/year
      .121 (716) ($49) (9.5) = $ 40,329.00
   c. LOW (.55) (.102) = 5.6% order 9.5/year
      .056 (716) ($49) (9.5) = $ 18,665.00

# III. NONCOLLEGIATE POSTSECONDARY SCHOOL SCENARIOS - SALES TO NONMEMBER AND MEMBER STATES

## 6. ARTS/DESIGN SCHOOLS

### A. First Year's Order

1. $10 per catalog
   - a. HIGH (27% order 1)
     .27 (246) ($10) (1) = $ 664.00
   - b. MEDIUM (22% order 1)
     .22 (246) ($10) (1) = $ 541.00
   - c. LOW (10.2% order one-fifth of 1 = .2)
     .102 (246) ($10) (.2) = $ 50.00
     (10.2% order 1)
     .102 (246) ($10) (1) = $ 251.00

2. $20 per catalog
   - a. HIGH (.55) (.27) = 14.8% order 1
     .148 (246) ($20) (1) = $ 728.00
   - b. MEDIUM (.55) (.22) = 12.1% order 1
     .121 (246) ($20) (1) = $ 595.00
   - c. LOW (.55) (.102) = 5.6% order .2
     .056 (246) ($20) (.2) = $ 55.00
     (5.6% order 1)
     .056 (246) ($20) (1) = $ 276.00

3. $49 per catalog
   - a. HIGH (.55) (.27) = 14.8% order 1
     .148 (246) ($49) (1) = $ 1,784.00
   - b. MEDIUM (.55) (.22) = 12.1% order 1
     .121 (246) ($49) (1) = $ 1,459.00
   - c. LOW (.55) (.102) = 5.6% order .2
     .056 (246) ($49) (.2) = $ 135.00
     (5.6% order 1)
     .056 (246) ($49) (1) = $ 675.00

### B. Annual Sales From Second Year On (Assumes 20 new titles/year)

1. $10 per catalog
   - a. HIGH (27% order .25/year)
     .27 (246) ($10) (.25) = $ 166.00
   - b. MEDIUM (22% order .25/year)
     .22 (246) ($10) (.25) = $ 135.00
   - c. LOW (10.2% order .25/year)
     .102 (246) ($10) (.25) = $ 63.00

## III. NONCOLLEGIATE POSTSECONDARY SCHOOL SCENARIOS - SALES TO NONMEMBER AND MEMBER STATES

### 6. ARTS/DESIGN SCHOOLS (cont.)

2. $20 per catalog
    a. HIGH (.55) (.27) = 14.8% order .25/year
    .148 (246) ($20) (.25) = $ 182.00
    b. MEDIUM (.55 ) (.22) = 12.1% order .25/year
    .121 (246) ($20) (.25) = $ 149.00
    c. LOW (.55 ) (.102) = 5.6% order .25/year
    .056 (246) ($20) (.25) = $ 69.00

3. $49 per catalog
    a. HIGH (.55) (.27) = 14.8% order .25/year
    .148 (246) ($49) (.25) = $ 446.00
    b. MEDIUM (.55) (.22) = 12.1% order .25/year
    .121 (246) ($49) (.25) = $ 365.00
    c. LOW (.55) (.102) = 5.6% order .25/year
    .056 (246) ($49) (.25) = $ 169.00

## III. NONCOLLEGIATE POSTSECONDARY SCHOOL SCENARIOS - SALES TO NONMEMBER AND MEMBER STATES

### 7. HOSPITAL SCHOOLS

A. First Year's Order

1. $10 per catalog
   - a. HIGH (27% order 6)
     .27 (917) ($10) (6) = $ 14,855.00
   - b. MEDIUM (22% order 5)
     .22 (917) ($10) (5) = $ 10,087.00
   - c. LOW (10.2% order one-fifth of 6 = 1.2
     .102 (917) ($10) (1.2) = $ 1,122.00
     (10.2% order 1)
     .102 (917) ($10) (1) = $ 935.00

2. $20 per catalog
   - a. HIGH (.55) (.27) = 14.8% order 6
     .148 (917) ($20) (6) = $ 16,286.00
   - b. MEDIUM (.55) (.22) = 12.1% order 5
     .121 (917) ($20) (5) = $ 11,096.00
   - c. LOW (.55) (.102) = 5.6% order 1.2
     .056 (917) ($20) (1.2) = $ 1,232.00
     (5.6% order 1)
     .056 (917) ($20) (1) = $ 1,027.00

3. $49 per catalog
   - a. HIGH (.55) (.27) = 14.8% order 6
     .148 (917) ($49) (6) = $ 39,901.00
   - b. MEDIUM (.55) (.22) = 12.1% order 5
     .121 (917) ($49) (5) = $ 27,184.00
   - c. LOW (.55) (.102) = 5.6% order 1.2
     .056 (917) ($49) (1.2) = $ 3,019.00
     (5.6% order 1)
     .056 (917) ($49) (1) = $ 2,516.00

B. Annual Sales From Second Year On (Assumes 20 new titles/year)

1. $10 per catalog
   - a. HIGH (27% order 1.5/year)
     .27 (917) ($10) (1.5) = $ 3,714.00
   - b. MEDIUM (22% order 1.5/year)
     .22 (917) ($10) (1.5) = $ 3,026.00
   - c. LOW (10.2% order 1.5/year)
     .102 (917) ($10) (1.5) = $ 1,403.00

## III. NONCOLLEGIATE POSTSECONDARY SCHOOL SCENARIOS - SALES TO NONMEMBER AND MEMBER STATES

### 7. HOSPITAL SCHOOLS (cont.)

2. $20 per catalog
   a. HIGH (.55) (.27) = 14.8% order 1.5/year
      .148 (917) ($20) (1.5) = $ 4,071.00
   b. MEDIUM (.55) (.22) = 12.1% order 1.5/year
      .121 (917) ($20) (1.5) = $ 3,329.00
   c. LOW (.55) (.102) = 5.6% order 1.5/year
      .056 (917) ($20) (1.5) = $ 1,541.00

3. $49 per catalog
   a. HIGH (.55) (.27) = 14.8% order 1.5/year
      .148 (917) ($49) (1.5) = $ 9,975.00
   b. MEDIUM (.55) (.22) = 12.1% order 1.5/year
      .121 (917) ($49) (1.5) = $ 8,155.00
   c. LOW (.55) (.102) = 5.6% order 1.5/year
      .056 (917) ($49) (1.5) = $ 3,774.00

## III. NONCOLLEGIATE POSTSECONDARY SCHOOL SCENARIOS - SALES TO NONMEMBER AND MEMBER STATES

### 8. ALLIED HEALTH SCHOOLS

#### A. First Year's Order

1. $10 per catalog
    a. HIGH (27% order 3)
    .27 (356) ($10) (3) = $ 2,884.00
    b. MEDIUM (22% order 2)
    .22 (356) ($10) (2) = $ 1,566.00
    c. LOW (10.2% order one-fifth of 3 = .6)
    .102 (356) ($10) (.6) = $ 218.00
    (10.2% order 1)
    .102 (356) ($10) (1) = $ 363.00

2. $20 per catalog
    a. HIGH (.55) (.27) = 14.8% order 3
    .148 (356) ($20) (3) = $ 3,161.00
    b. MEDIUM (.55) (.22) = 12.1% order 2
    .121 (356) ($20) (2) = $ 1,723.00
    c. LOW (.55) (.102) = 5.6% order .6
    .056 (356) ($20) (.6) = $ 239.00
    (5.6% order 1)
    .056 (356) ($20) (1) = $ 399.00

3. $49 per catalog
    a. HIGH (.55) (.27) = 14.8% order 3
    .148 (356) ($49) (3) = $ 7,745.00
    b. MEDIUM (.55) (.22) = 12.1% order 2
    .121 (356) ($49) (2) = $ 4,221.00
    c. LOW (.55) (.102) = 5.6% order .6
    .056 (356) ($49) (.6) = $ 586.00
    (5.6% order 1)
    .056 (356) ($49) (1) = $ 977.00

#### B. Annual Sales From Second Year On (Assumes 20 new titles/year)

1. $10 per catalog
    a. HIGH (27% order .75/year)
    .27 (356) ($10) (.75) = $ 721.00
    b. MEDIUM (22% order .75/year)
    .22 (356) ($10) (.75) = $ 587.00
    c. LOW (10.2% order .75/year)
    .102 (356) ($10) (.75) = $ 272.00

## III. NONCOLLEGIATE POSTSECONDARY SCHOOL SCENARIOS - SALES TO NONMEMBER AND MEMBER STATES

### 8. ALLIED HEALTH SCHOOLS (cont.)

2. $20 per catalog
   - a. HIGH (.55) (.27) = 14.8% order .75/year
     .148 (356) ($20) (.75) = $ 790.00
   - b. MEDIUM (.55) (.22) = 12.1% order .75/year
     .121 (356) ($20) (.75) = $ 646.00
   - c. LOW (.55) (.102) = 5.6% order .75/year
     .056 (356) ($20) (.75) = $ 299.00

3. $49 per catalog
   - a. HIGH (.55) (.27) = 14.8% order .75/year
     .148 (356) ($49) (.75) = $ 1,936.00
   - b. MEDIUM (.55) (.22) = 12.1% order .75/year
     .121 (356) ($49) (.75) = $ 1,583.00
   - c. LOW (.55) (.102) = 5.6% order .75/year
     .056 (356) ($49) (.75) = $ 733.00

## III. NONCOLLEGIATE POSTSECONDARY SCHOOL SCENARIOS - SALES TO NONMEMBER AND MEMBER STATES

### 9. OTHER SCHOOLS

#### A. First Year's Order

1. $10 per catalog
    - a. HIGH (27% order 8)
      .27 (210) ($10) (8) = $ 4,536.00
    - b. MEDIUM (22% order 7)
      .22 (210) ($10) (7) = $ 3,234.00
    - c. LOW (10.2% order one-fifth of 8 = 1.6)
      .102 (210) ($10) (1.6) = $ 343.00
      (10.2% order 2)
      .102 (210) ($10) (2) = $ 428.00
2. $20 per catalog
    - a. HIGH (.55) (.27) = 14.8% order 8
      .148 (210) ($20) (8) = $ 4,973.00
    - b. MEDIUM (.55) (.22) = 12.1% order 7
      .121 (210) ($20) (7) = $ 3,557.00
    - c. LOW (.55) (.102) = 5.6% order 1.6
      .056 (210) ($20) (1.6) = $ 376.00
      (5.6% order 2)
      .056 (210) ($20) (2) = $ 470.00
3. $49 per catalog
    - a. HIGH (.55) (.27) = 14.8% order 8
      .148 (210) ($49) (8) = $ 12,183.00
    - b. MEDIUM (.55) (.22) = 12.1% order 7
      .121 (210) ($49) (7) = $ 8,716.00
    - c. LOW (.55) (.102) = 5.6% order 1.6
      .056 (210) ($49) (1.6) = $ 922.00
      (5.6% order 2)
      .056 (210) ($49) (2) = $ 1,152.00

#### B. Annual Sales From Second Year On (Assumes 20 new titles/year)

1. $10 per catalog
    - a. HIGH (27% order 2/year)
      .27 (210) ($10) (2) = $ 1,134.00
    - b. MEDIUM (22% order 2/year)
      .22 (210) ($10) (2) = $ 924.00
    - c. LOW (10.2% order 2/year)
      .102 (210) ($10) (2) = $ 428.00

## III. NONCOLLEGIATE POSTSECONDARY SCHOOL SCENARIOS - SALES TO NONMEMBER AND MEMBER STATES

9. OTHER SCHOOLS (cont.)

2. $20 per catalog
    a. HIGH (.55) (.27) = 14.8% order 2/year
    .148 (210) ($20) (2) = $ 1,243.00
    b. MEDIUM (.55) (.22) = 12.1% order 2/year
    .121 (210) ($20) (2) = $ 1,016.00
    c. LOW (.55) (.102) = 5.6% order 2/year
    .056 (210) ($20) (2) = $ 470.00

3. $49 per catalog
    a. HIGH (.55) (.27) = 14.8% order 2/year
    .148 (210) ($49) (2) = $ 3,046.00
    b. MEDIUM (.55) (.22) = 12.1% order 2/year
    .121 (210) ($49) (2) = $ 2,490.00
    c. LOW (.55) (.102) = 5.6% order 2/year
    .056 (210) ($49) (2) = $ 1,152.00

## IV. SECONDARY SCHOOLS OTHER THAN PUBLIC HIGH SCHOOLS SCENARIOS SALES TO NONMEMBER AND MEMBER STATES

In this example, only the 586 private secondary schools and 1,395 public area vocational centers in nonmember and member states are considered to be customers.

The estimates for the first year's order and the annual sales from the second year on are derived by varying the number of catalogs bought per customer.

The percentages used and the number of catalogs bought per customer are taken from the results of a survey done by Illinois. In a sample of public high schools, 20.6% said they either had or would purchase V-TECS catalogs at $10 per catalog. This percentage was also used for these estimates.

Note that these schools overlap with the comprehensive public high schools. If the local SAVC offers a program, the public high school probably will not do so.

## IV. SECONDARY SCHOOLS OTHER THAN PUBLIC HIGH SCHOOLS SCENARIOS
## SALES TO NONMEMBER AND MEMBER STATES
(HIGH OPTION AT $10.00)

1. PRIVATE SECONDARY SCHOOLS

A. First Year's Order (20.6% order 16)
.206 (586) ($10) (16) = $ 19,315.00

B. Annual Sales From Second Year On (Assumes 20 new titles/year)
(20.6% order 5/year)
.206 (586) ($10) (5) = $ 6,036.00

2. PUBLIC AREA VOCATIONAL CENTERS

A. First Year's Order (20.6% order 16)
.206 (1,395) ($10) (16) = $ 45,979.00

B. Annual Sales From Second Year On (Assumes 20 new titles/year)
(20.6% order 5/year)
.206 (1,395) ($10) (5) = $ 14,369.00

# APPENDIX D

# PERSONAL SELLING GUIDE

I. Knowledge brought to the sales effort

  A. Product knowledge
    1. Features of the catalog
    2. Price
    3. State of the art
    4. Construction
    5. Performance

  B. Buyer motives

  C. Buyer behavior

II. The basic sales tasks

  A. Efforts before the sale
    1. Prospecting
    2. Qualifying
    3. Gathering pre-approach data
    4. Getting appointments
    5. Making routine calls

  B. Efforts during the sale
    1. Presentations
    2. Overcoming objections
    3. Closing
    4. Filling out orders
    5. Taking reorders

  C. Efforts after the sale
    1. Follow-up
    2. Starting the next sale

III. Executive duties

  A. Time management

  B. Record keeping

  C. Promotional mix